VISAKHAPATNAM STEEL PLANT
MATERIALS MANAGEMENT DEPARTMENT
(PURCHASE WING)
BLOCK-A, ADMINISTRATIVE BUILDING
VISAKHAPATNAM-530 031 (A.P) INDIA

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OPEN TENDER NOTIFICATION

Corrigendum No.1 dt.05.03.2014 for tender opening date extension

Invitation to Tender No.Pur.3.21.0057/0483 Dated 03/02/2014

Sealed tenders are invited for Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply

The tender opening date is extended up to 24.03.2014 at 10.30 Hrs

Tenderers who are interested in participating in the tender can download the tender document from our website: **www.vizagsteel.com** and submit their offer before 1030 hours (IST) on last date of receipt of tender as per the instructions given in the tender document.In case of difficulty in downloading of tender documents, the tender document shall be sent by post free of cost on written request from the tenderer.

Tenderers are required to visit our website regularly for any corrigendum/addendum.

ED (MM)

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OPEN TENDER NOTIFICATION

Invitation to Tender No.Pur.3.21.0057/0483 Dated 03/02/2014

Sealed tenders are invited for Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply

Last date & time for receipt of Tenders **by 1030 Hrs (IST) on 05.03.2014**

Tenderers who are interested in participating in the tender can download the tender document from our website: **www.vizagsteel.com** and submit their offer before 1030 hours (IST) on last date of receipt of tender as per the instructions given in the tender document.In case of difficulty in downloading of tender documents, the tender document shall be sent by post free of cost on written request from the tenderer.

Tenderers are required to visit our website regularly for any corrigendum/addendum.

ED (MM)

RASHTRIYA ISPAT NIGAM LIMITED
VISAKHAPATNAM STEEL PLANT
(A Government of India Enterprise)

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Invitation for Tender No. Pur.3.21.0057/0483 dt.03/02/2014For Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply

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RASHTRIYA ISPAT NIGAM LIMITED
VISAKHAPATNAM STEEL PLANT
VISAKHAPATNAM - 530 031, INDIA
Tel: +91 891 2518683 / 2740437 Fax: +91 891 2518753 / 891 2518756

OPEN TENDER NOTICE FOR Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply
INVITATION TO TENDER NO. PUR.3.21.0057/0483 Dt.03.02.2014

1.0 **NOTICE INVITING TENDERS FOR Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply.**

1.1 Rashtriya Ispat Nigam Limited (RINL), Visakhapatnam Steel Plant (VSP), hereinafter referred to as PURCHASER, hereby invites tenders from **Indigenous Manufacturers/suppliers** only for Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA for Madharam Dolomite Mine, Madharam as per enclosed specification & scope of supply**)** conforming to Technical specifications at **Annexure -I** of tender documents.

1.2 **QUANTITY**: The PURCHASER intends to procure the Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply **for a quantity of 01 No. from single source.**

1.3 **EXECUTION**: The tentative schedule at which the supplier should effect deliveries & commence the job, shall be per the schedules as indicated by the Purchaser at the time of finalisation of the LOI / Acceptance to Tender(approximately). The Purchaser reserves the right to revise the schedules depending on VSP's production requirements and storage capacity, without any additional financial implication to the Purchaser.

1.4.1 Tenderers should submit their tenders in two parts:

Part-A : Techno-Commercial Bid and
Part-B : Price Bid

in separate sealed envelopes indicating clearly on the cover whether it contains Part A: Techno- Commercial Bid or Part B : Price Bid.

1.4.2 A Proforma as given in **Annxexure -III** of the Tender Documents is prescribed for Part-B : Price Bid. All the tenderers are advised to submit their Part-B: Price Bid only in the prescribed proforma. *The details of Prices if mentioned in both the Techno commercial as well as price bid, the price bid details shall be considered as final for evaluation.* Any other terms and conditions other than the price mentioned in the price bid shall not be taken into consideration

1.4.3 RINL shall have the option of resorting to reverse e-auction. All technically and commercially acceptable bidders would be required to participate in the reverse e-auction. Details in regard to reverse e-auction are mentioned at para 1.4.5 below. In case of reverse e-auction the bidders would be required to quote prices only on the basis of landed net of cenvat price at VSP stores. The bidders shall register themselves and give USER ID details positively in the Techno Commercial bid.

1.4.4 RINL will inform the technically and commercially acceptable (TA & CA) tenderers of the date and time of reverse e-auction and they shall participate in the process. All the tenderers would have to generate user ID & Password by following the following steps:

- Go to www.vizagsteel.com
- Click on auctions link.
- Click on MM Reverse e-auctions
- Click on "new user!!! Click to register" for generating user ID and fixing corresponding password.

1.4.5 Definition of key terms for reverse auction and RINL's reverse e-auction user manual is uploaded on our web sitewww.vizagsteel.com under auctions menu and MM reverse auctions sub menu. TA & CA tenderers would be authorized to quote their LNCP prices on only e-reverse auction engine on a fixed time and date.
After the completion of the reverse e-auction at the end of price delivery process, the purchase order would be placed in the normal mode.

In case of reverse e-auction the bidders would be required to quote prices only on the basis of landed net of cenvat. Modalities of evaluation of landed net of cenvat price is given below.

4.4 **Illustration for calculation of landed Net of VAT/CENVAT:**

SUPPLY DESIGN & INSTALLATION OF DG SET			Rs.	Rs.
1.	MATERIAL COST PER UNIT	A	1000	1000
2.	EXCISE DUTY @ 12.36%	B	123.6	123.6
3	SALES TAX	C	CST (Against For-C) @2% 22.47	VAT @ 5% 56.18
4	LANDED COST	D	1146.07	1179.78
5	VAT INPUT CREDIT (@ 2.02%)	E	0	22.70
6	LANDED NET OF CENVAT COST (LNCP)	F=D-B-E	1022.47	1034.83
II	FOR SERVICE RENDERED			
7	SERVICE COST PER UNIT	G	100	
8	SERVICE TAX@12.36%	H	12.36	
9	LANDED VALUE	I	112.36	
10	LANDED NET OF CENVAT	J=I-H	100.00	
11	TOTAL LNCP	K=F+J	1122.47	1134.83

Material cost per unit shall include item quoted at Annexure-A and Annexure-B.2 which shall be considered for ranking purpose. The itemized price list for 2-years spares as per Annexure B.1 shall not be considered for evaluation of offers.

1.4.6 In case of the reverse e-auction is conducted the sealed price bids of all the TA & CA tenderers, irrespective of either they have participated in the reverse e-auction or not, shall be opened within a short duration. Based on the prices so received through reverse e-auction and the sealed price bids received in the physical mode of tender, a composite comparative statement shall be made considering the lower of prices (i.e sealed price bid prices and reverse e-auction prices) of all the parties. Placement of orders shall be considered on the L1 price(LNCP) so arrived.

1.5.0 **BID MONEY/Earnest Money Deposits**:

1.5.1 Each tender shall be considered only if Bid money in Indian Rupees by means of either a Cheque/Demand Draft drawn on any Scheduled Bank and payable to Rashtriya Ispat Nigam Ltd. at Visakhapatnam(subject to realization) or a Bid Bond in the form of Bank Guarantee (as per the prescribed proforma at **Annexure-V** of the Tender Documents) established in favour of RINL for an amount Rs.1,75,000 (Rupees One lakh Seventy Five Thousand only) is submitted along with or prior to opening of Part-A: Techno-commercial Bid.

1.5.2 The Bid Bond as mentioned above should be established either in the form of Bank Guarantee issued by any of the Nationalized Bank (whether situated at Visakhapatnam or outstation) **with a clause to enforce the same on their local branch at Visakhapatnam** or by way of Account payee Demand Draft/cheque payable at Visakhapatnam in favour of Rashtriya Ispat Nigam Limited. The Bank Guarantees from other Scheduled Banks (other than Nationalized) Banks) should however be from the branch located in Visakhapatnam. The A/c payee cheque & demand draft established through Co-operative Banks are not acceptable. The Bid Bond should be valid till 31.12.2014. Tenders received without the Bid Bond / Bid Money of requisite value will summarily rejected. Bid money, if paid in cash, shall not accrue interest.

1.6.0 Tenders will be accepted upto **1030 Hrs (IST) on 05.03.2014** Techno-Commercial part of the Tender (Part-A) will be opened immediately thereafter in the presence of the Tenderers or Authorised Representatives of the Tenderers, who may choose to be present. The date and time of price bid opening shall be intimated separately to technically and commercially acceptable tenderers. Price Bids (Part-B) of those Tenderers who have been Techno-Commercially accepted shall be opened in the presence of the Tenderers or Authorised Representatives of the Tenderers who may choose to be present in case reverse e auction option is not exercised by RINL/VSP

1.6.1 Tenders submitted against NIT/Tender shall not be returned in case the tender opening date is extended/postponed. Tenderers desirous to modify their offer/terms may submit their revised/supplementary offer(s) within the extended TOD, by clearly stating the extent of updation done to their original offer. The employer reserves the right to open the original offer along with revised offer(s)

1.7 All the tenders shall be evaluated on the basis of landed Net of CENVAT / VAT basis.

1.8 Notwithstanding anything specified in this Tender Documents, RINL, in their sole discretion, unconditionally and without having to assign any reason, reserves to themself the rights:

a) To accept or reject the lowest tender or any other tender or all the tenders;
b) To accept any tender in full or in part;
c) To reject the offers not conforming to the tender terms and
d) To extend purchase preference to Local SSIs (Micro and Small Enterprises) subject to submission of documents as stipulated at 1.0 & 9.5 of Annx-II, as given below. In case Local MSE becomes TAL1 tenderer purchase preference will not be extended to another Local MSE in that tender.

2.0 VSP after opening the tender/bid document may seek in writing documents/clarifications which are necessary for evaluation of the tender/bid document from tenders/bidders or issuing authority for confirmation of eligibility/pre qualification stipulated in the NIT.

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ANNEXURE-I
PUR.3.21.0057/0483, DT.03/02/2014

Specification and Scope for Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA for Madharam Dolomite Mine, Madharam as per enclosed specification & scope of supply

1.0 **Specification and Scope:**

1. Supply of Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply.

A. Existing Connected Load : 1300 KVA

Existing contract Max. Demand : 750 KVA
Diversity Factor : Maximum Demand / connected load 750 / 1300 = 0.58

B. Connected load after 6.3 MTPA Expansion - 2000 KVA
Expected contract Max. demand after expansion
(Considering same diversity factor of 0.58) = 2000x0.58=1160 KVA

C. D G Set rating with a load factor of 0.8 = 1160 /0.8 = 1450 KVA
= 1.45 MVA

1.1 **Scope of the supplier:**

a) Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply No.VSP/DEE-MDM-023

b) As per enclosed Annexure-A
c) As per enclosed format in Annexure B.1
d) As per enclosed format in Annexure B.2
e) As per Annexure-C

SPECIFICATION FOR DESIGN, MANUFACTURE, ASSEMBLY, TESTING,PACKING, SUPPLY, STORAGE AT SITE, ERECTION, COMMISSIONING & GUARANTEE TESTS OF 11 Kv , 1500 Kva DG SET

SPECIFICATION NO.VSP-DEE-MDM-023

May 2013

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SECTION – I

1.0 GENERAL

1.1 Madharam Dolomite Mine (MDM) in Khammam District,Andhra Pradesh is located at a distance of about 510 km from Visakhapatnam Steel Plant (VSP). It is linked with Karepalli through a 7 km long railway siding.The mining lease (ML) of MDM covers an area of about 384.46 hectares. MDM is in operation since 1989. The mine was designed for a throughput capacity of 250,000 tons per year in one-shift operation per day. However, EMPLOYER was operating the mine and the associated crushing and screening plant in 1-shift operation for production of SMS/flux grade (-25 mm to 50 mm) and brick grade (9 mm to 25 mm) dolomite. Subsequently, to meet the enhanced requirement of dolomite of three different size specifications, EMPLOYER introduced certain minor modifications, and operated the mine in 2 shifts to produce flux, brick and BF (-80 mm) grade dolomite. The third shift is utilised for upkeep and maintenance. Presently, EMPLOYER's intake of brick grade dolomite from MDM has considerably reduced; the mine is now mostly producing flux and BF grade dolomite.

1.2 This specification covers the design, manufacture, assembly, testing, packing, supply, transportation to site, unloading storage at site, erection, start-up, commissioning and guarantee tests for one (1) No. of 11kV, 1500 kVA Diesel Generator sets along with the associated auxiliaries, pipe work, exhaust system, electrics and instrumentation as specified.

1.3 The tender for all items of equipment and system covered under this specification shall be complete in all respects and any item of equipment or accessory not specifically mentioned in this tender document but considered essential for efficient and satisfactory operation of individual equipment and system as a whole shall be included in the offer. Incomplete offers will not be considered.

1.4 The Tenderer shall study the entire specification carefully and satisfy himself thoroughly regarding the workability of the equipment and the system as a whole and shall take full responsibility for the guaranteed operation of the equipment as regards ratings,performance and smooth reliable working.

1.5 The Tenderer shall visit the site and ascertain local conditions, traffic restrictions, labour conditions, the accommodation he may require for his staff and labour, site conditions, existing structures and other obstructions in the area if any, and allow for extras, likely to be incurred due to any or all the above in his quoted rates. No additional claim whatsoever will be admissible later on these grounds.

1.6 The Tenderer shall prepare drawings and rendering assistance to Purchaser for getting approval from statutory body (i.e. Central Electricity Authority / Chief Electrical Inspectorate and Chief Controller of Explosives) clearances as applicable. Any modification demanded by authorities shall be carried out by the tenderer without extra cost to Purchaser.

1.7 Each exception to the technical specification or other tender documents shall be listed separately in the tender.Exceptions not clearly listed in the tender shall not be considered by the Purchaser at any later stage.

2.0 STANDARDS

2.1 The equipment and accessories covered by this specification shall be designed, manufactured and tested in accordance with the latest relevant standards published by the Bureau of Indian Standards in order that specific aspects under

Indian conditions are taken care of. Where suitable Indian Standards are not available, other international standards such as BS, ANSI / IEEE, DIN /VDE, IEC, JIS may be adopted with prior approval of the Purchaser.

2.2 All electrical equipment shall conform to the latest Indian Electricity Rules as regards safety, earthing and other essential provisions specified therein for installation and operation of equipment.

2.3 All equipment shall be manufactured with high quality materials and workmanship. Standards in design and construction of equipment and systems intended for identical tasks and duties shall be considered. All like parts on equipment supplied or on duplicate equipment are to be interchangeable.

2.4 The equipment and installation shall comply with the regulations of the Insurance Association of India published by the Tariff Advisory Committee for General Insurance.

2.5 All equipment and installations shall also comply with relevant statutory requirements of the Government of India and Government of Andhra Pradesh.

2.6 The Tenderer shall ensure that the plant and equipment supplied by him shall not subject personnel to noise levels exceeding the permissible limits. The noise level shall be restricted to 75 dB (A) at 1m distance from the equipment.

3.0 OTHER REQUIREMENTS

3.1 Painting

The Equipment and fabricated structure etc shall be thoroughly cleaned and painted in accordance with IS specification. The colour shade of finish paint (two coats) shall be as per shade no.631 of IS:5 for indoor equipment and shade No.632 of IS: 5 for outdoor equipment. Clean and touch up paint shall be applied at site as required.

3.2 Safety

All equipment shall be complete with approved safety devices wherever potential hazard to personnel exists and with provision for safe access of personnel to and around equipment for operational and maintenance functions. The design shall include all reasonable precautions and provisions for the safety of operating and maintenance personnel.

4.0 DESIGN BASIS

One (1) No. diesel generator as per IS-3046 set covered in this specification shall be designed to achieve the following:

a) To give an output of 1500 kVA (1200 kW) at generator terminals at 11 kV, Three Phase, 50 Hz, 0.8 pf.

b) To start through Automatic Mains Failure (AMF) system within the time limit of 30 seconds from cold condition and take normal load. Initial starting of DG sets shall be by electrical means from a battery bank. A stand by air start facilityshall also be provided.

c) Diesel Engine shall be designed for using High Speed Diesel (HSD) as the main fuel.

d) The DG set shall be suitable for operation under maximum ambient temperature of 50^0C with relative humidity 88 % (max.) monthly mean as referred inAnnexure-C of this specification along with site information.

e) All equipment within DG Island shall be designed for maximum ambient temperature of 50^0 C.

f) Noise level 75 dB (A) measured at 1 meter from the equipment.

g) 10% over loading capability for 1 hour at every 8 hours of continuous operation.

h) It is required to synchronise DG set output with the 11kV bus of existing MRS through VCB. Tenderer shall consider supply & installation of 1 no. 630 A Siemens make , type 3AH5 VCB with necessary protection relay, CT's in their scope. They shall use existing spare trolley for this purpose.

5.0 SCOPE OF WORK

The scope of supply and installation covered under this specification shall comprise but not be limited to the following:

- Diesel engine and accessories with starting system, lubricating system, engine cooling system, governing system, fuel system, intake air and exhaust system, pipes & fittings etc.
- Alternator 1500 kVA (1200 kW) rating 11 kV,TP, 50 Hz Brushless, self-excited.
- 24 v DC Battery and Battery Charger.
- Independent battery charger suitable for engine starting system.
- Instruments & Control.
- High speed diesel oil system including oil tank, Pumping System, Separator unit, return fuel oil system, associated pipe work, valves and instruments.
- Complete compressed air system for startup of engine shall also be provided
- One (1) No. of Corton Steel chimney.
- Accostic enclosure
- Pre lube oil system if required.
- Interconnecting pipe work.
- Cooling water line within DG enclosure.
- One (1) No. 11kV 630 A Vacuum Circuit Breaker (VCB) Panel.
- One(1) no.11 kV Siemens make 630 A, type 3AH5 VCB to be mounted in existing trolley at Main Receiving Station (MRS) along with suitable protective relays.
- One(1) no.11 kV, 630A changeover switch to be mounted on the existing structure at outdoor switchyard of existing MRS.
- 11kV (UE), 3C, 300 Sq.mm Aluminium conductor, XLPE insulated and FRLS PVC sheathed, flat striped armoured cable from the output terminal of DG to 11 kV VCB breaker Panel and also from DG set to changeover switch and from changeover switch to 11 kV VCB at MRS.
- 11 kV (UE), 1C 300 sq. mm. Al. conductor, XLPE insulated and FRLS PVC sheathed, flat striped armoured cable from Generator Neutral to Neutral grounding resistor panel.
- 1.1 kV grade power and control cabling within DG Island.
- GI cable trays and supports within DG Island.
- Equipment earthing and neutral earthing.

- 11/√3kV, 30 Sec rated Neutral Grounding Resistor (NGR) of suitable capacity with motorized isolator suitable for local/remote operation.
- One (1) No. DG set local control panel with meters, controls, emergency stop push buttons, display units, indicators, alarm & annunciation system, AVR system, AMF control etc.
- Miscellaneous structures such as platforms, ladders, floor plates etc., which are integral to the equipment is in tenderer's scope.
- Safety items as per IE rules for normal operation and maintenance.
- Common base frame.
- Foundation bolts and embedments including grouting.
- Technological supporting structures for equipment.
- Insulation and cladding.
- Anti vibration pads for DG set and panels /boards.
- Free commissioning spares including lube oil, fuel oil and air filters, etc.
- Consumables such as lubricating oil, sulphuric acid etc. required for initial filling, start-up, commissioning and performance tests etc.
- Tools and Tackles.
- Complete painting including final coating for all structures and equipment.
- Preparation of drawing and obtaining approval from statutory authorities (i.e. from Chief Electrical Inspectorate and from Controller of Explosives) as applicable for design, manufacture and installation.
- Necessary civil foundation works for the DG set and associated equipment

6.0 SPARES

The Tenderer shall submit with his offer itemised prices for various spares. The offer for the spares shall include the following:

6.1 ***Commissioning Spares***: Commissioning spares shall include all spares required for commissioning of the equipment and subsequent operation, until demonstration of satisfactory performance in accordance with the guarantees and provisional acceptance. Commissioning spares are to be included in the main offer in sufficient quantities and must be at site along with the main equipment. The Tenderer shall furnish a list of commissioning spares included in the offer.

6.2 ***Spares for Two (2) Years' Normal Operation***: The Tenderer shall submit with his offer quotation and delivery schedule for spares for two (2) years' normal operation of the plant after provisional acceptance and demonstration of satisfactory performance. The list of spares shall be in accordance with format furnished in Annexure-B.1.

6.3 ***Annual maintenance***: the Tenderer shall also quote separately for annual maintenance and operation of supplied DG set to be operative from second year onwards (i.e. after completion of contract as an optional price) for a period of 2 years renewable as per requirement subsequently. They shall submit their quote with two versions namely with inclusive of spare parts price/ without spare parts price.

6.4 Tenderer shall confirm spares support for a period of ten (10) years.

7.0 TOOLS AND TACKLES

The Tenderer shall include in his offer all special tools and tackles required for normal operation and maintenance of the equipment. Itemized list, price and quantity of these shall be furnished as per format indicated in Annexure B.2.

8.0 TESTING and INSPECTION

All plant and equipment included in the contract including spares shall be inspected. All necessary tests shall be carried out by the successful tenderer to demonstrate whether the material and equipment offered conform to the contract, drawings, relevant standards and specifications. Test certificates for bought out items including electrics, instruments and pneumatic equipment etc. shall be submitted along with inspection call or during inspection of the equipment.

Valid calibration certificates for all inspection, measuring and test equipment, issued by government laboratories / private laboratories recognised by NPL or other nodal agencies, used during inspection of equipment shall be submitted by the successful Tenderer along with inspection call or during inspection of the equipment.Spares supplied as components shall be put up along with necessary test certificates / internal inspection reports.The Tenderer shall furnish in his offer a complete list of tests he proposes to conduct at site during commissioning.

9.0 DRAWINGS and DOCUMENTS

All drawings, test certificates, instructions etc. shall be in English language.

9.1 Tender Drawings

Tenderer shall enclose with his offer all necessary drawings and documents required for proper understanding of the design, arrangement and functioning of the equipment offered. The drawings/ documents shall include but not limited to the following:

i) Single line diagram showing metering and protection offered.
ii) Write-up on AMF start and AVR & excitation offered.
iii) All information asked for in the Questionnaire, Annexure-D.
iv) List of alarm annunciation (solid state)
v) Descriptive literature and catalogue for the major items.
vi) DG control panel, generator protection panel, 11kV Vacuum Circuit Breaker panel, indicating position of components / devices, cable termination etc.
vii) 24v Battery system and associated equipment required with DG set.
viii) Independent battery charger for engine starting system.
ix) P & I diagram for lube oil system and cooling system.
x) DG layout plan & section and detailed equipment arrangement indicating locations of mechanical and electrical equipment supplied by the tenderer.
xi) Reference list of similar installations executed by the tenderer.
xii) Total heat load (in kW) generated by mechanical and electrical equipment within DG Island.

Tenderer shall also furnish in detail any information regarding the equipment quoted by him if asked for by the Purchaser during tender evaluation.

9.2 Drawings and Documents during engineering and Execution

The Tenderer shall submit following drawing / documents in four (4) sets for approval / comments prior to commencement of manufacture.

i) Equipment data sheet.
ii) GA drawings for DG set & auxiliaries, DG control panel and generator protection panel, 11 kV Vacuum Circuit Breaker (VCB) panel, indicating position of components/ devices, cable termination etc.
iii) 24 v / 110 v Battery system and associated equipment required with DG set.
iv) Independent battery charger for engine starting system.
v) Layout plan and section of DG showing equipment & fitting and clearances for erection and maintenance.
vi) Document quantifying total heat load (in kW) generated by various mechanical and electrical equipment associated to DG, including DG.
vii) Cable routing layout within DG Island.
viii) Earthing layout for DG Island.
ix) Cable schedule within DG Island.
x) Handling equipment required for erection and maintenance.
xi) Foundation data, embedments, cable trench, cable cutout, equipment/ panel mounting arrangement details (Feedback data).
xii) P & I diagram and write-up for fuel forwarding system, lube oil system and cooling water system.
xiii) Control schemes, wiring diagram, inter connection diagram and ratings of devices & Bill of materials.
xiv) Relevant catalogues & instructions for control & protection devices used.
xv) Write-up on control of DG set, AMF starting, AVR & excitation system.
xvi) Pre-dispatch Inspection procedure (QAP)

After obtaining approval / comments of the above drawings/documents, the tenderer shall supply all certified drawings.

9.3 Drawings, Instructions and Test Certificates with Equipment

The Tenderer will supply the following with the delivery of the equipment.

- Four (4):Sets of all certified drawings mentioned under item 8.2 above + two (2) reproducible tracings.
- Four (4):Sets of instruction for proper erection and assembly of all equipment.
- Four (4):Sets of instructions for operation and maintenance of the equipment and controls.
- Four (4):Sets of test certificates for each item of equipment.
- Four (4):Sets of manufacturer's catalogue of bought out items.
- Four (4):Sets of list of spare part with manufacturer's catalogue, wherever available.

9.4 Drawings on Completion of Work

On completion of the work, the Tenderer will supply Six (6)sets of prints of all drawings and softcopies in CD mentioned under item 8.0 above after incorporating all the changes that might have been effected during the course of execution of the contract.

10.0 DELIVERY

Total completion period for supply, installation, testing and commissioning of the total equipment covered under this specification shall be **Five (5)** months from

the date of LOI.

10.1 Engineering shall be completed within One (1) Month from the date of LOA.

10.2 The supply of all equipment covered under this specification shall be completed in **Four (4)** months from the date of LOI.

10.3 Installation, testing & commissioning of the total equipment covered under this specification shall be complete within **Five (5)** months from the date of LOI.

SECTION-II

1.0 EQUIPMENT SPECIFICATION

1.1 DIESEL ENGINE

1.1.1 The diesel engine shall be of standard design with radiator cooled,turbo charged developing rated power under reference conditions as per IS-3046 to deliver the load of 1500 kVA, 0.8 pf, 11kV, at generator terminals. The engine shall be capable of taking 10 per cent overload for 1 hour in every 8 hours of continuous operation.

1.1.2 The accessories of the engine shall be complete with fuel oil system, lubricating oil system, cooling water system, combustion air system, exhaust gas system, speed regulating system and instruments.

1.1.3 The engine and governing system shall be capable for sudden loading and load throw off conditions of the generator. The voltage transients shall be within limits.

1.1.4 AC driven pre-lube oil pumps (2 Nos.) shall be provided (if required) with one working and one standby. The engine will also be provided with safety control instruments to stop the engine under abnormal conditions indicated below:

a) Low lube oil pressure.
b) Cooling water temperature very high.
c) Engine over speed.
d) Lube oil temperature very high.
e) Cooling water pressure very low.
f) Lube oil level low.

1.1.5 The air intake system shall be equipped with a turbo charger unit. The exhaust gas system shall comprise of exhaust manifold to collect the exhaust gas from each cylinder and connected with suitable expansion bellows. The exhaust gas manifold shall be suitably insulated. Necessary exhaust gas piping with silencer shall be provided from turbo charger outlet and routed outside the building up to the exhaust point. The DG set shall be provided with a complete self contained lubricating oil system including engine driven oil pump, oil coolers, filters,inter connecting pipe work etc. A self contained, close circuit cooling water system shall be provided comprising of heat exchangers and interconnecting piping.

1.1.6 The engine shall have control panel housing all control switches, instruments for lube oil pressure, lube oil temperature, water temperature, hour meter with RPM indicator, indication lamps and alarm for abnormal conditions of the DG set.

1.1.7 The automatic starting of DG set shall be by means of AMF system and on battery mode, however manual starting feature shall also be provided from DG set Remote control panel.

1.1.8 The engine and generator shall be mounted on single base frame. The base frame shall be welded steel bar construction type.

1.1.9 Anti-vibration: Suitable anti-vibration pad shall be provided for the DG set.

1.1.10 Battery & Charger: A set of 24-volts, lead acid sealed & maintenance free type batteries and battery charger with leads and terminals. A non-corrosive battery stand shall be provided

for the batteries with 6 mm thick rubber sheet at the bottom of the stand. The battery cell tester and battery hydrometers shall also be supplied along with the set.

1.1.11 MS fabricated coupling guard shall be provided.

2.0 GENERATOR

The alternator shall be of 1500 kVA (1200 kW), 11kV, 50Hz, brushless, self-excitation confirming to IEC-60034. The generator shall be directly coupled to diesel engine mounted on a common base frame. Degree of protection of enclosure shall be IP: 54.

2.1 The Technical Parameters:

a) Continuous rating: 1500 kVA (1200 kW)
b) Rated terminal voltage : 11 kV
c) Power factor: 0.8 lag
d) Frequency: 50 Hz
e) Synchronous speed: 1500 rpm
f) Momentary peak over load: 50% for 3 sec.
g) Max. Percentage of unbalance permissible in generator: 20%
h) Max. Permissible Transient voltage dip during starting: 10%
i) Excitation system: Brushless
j) Class of insulation: F (temperature rise limited to 70 C over ambient)
k) Typing of cooling: IC 01 (alternatively IC 0141)
l) Type of enclosure: IP 54
m) Additional provisions: i) Anti condensation heaters
ii) 6 Nos. ETD for winding 2 Nos.per phase.
iii) 2 Nos. ETD for alternator bearing

2.2 The self- excitation and the automatic voltage regulating system shall give fast and accurate response so as to maintain the terminal voltage within +2% of the rated value at all loads and any power factor between 1.0 and 0.8 lag.

2.3 The alternator shall be of 1500 kVA (1200 kW),3 phase, 11kV,50Hz,brushless, self-excitation confirming to IEC-60034. The degree of protection of enclosure shall be IP: 54. The generator shall be directly coupled to the diesel engine mounted on the common base frame.

3.0 INSTRUMENTATION AND CONTROL SYSTEM

3.1 The diesel generator set will be provided with dedicated controller unit which will be interfaced with the plant DCS to provide remote manual start/stop and monitoring features from the plant DCS.

3.2 The instruments and control, equipment for the DG set and auxiliaries shall include but not be limited to the following:

3.3 Engine mounted instrument & controls

The flexibly mounted instrument panel on the engine shall be complete with the following:

- Starting switch & key.
- Lubricating oil pressure gauge.
- Cooling water pressure gauge
- Lube oil temperature gauge.
- Cooling water temperature gauge.

- Exhaust temperature at outlet.
- Battery charging ammeter
- Hour meter with RPM indicator
- Safety control – trip
- Level gauges for fuel oil storage tank.
- Level switches for lube oil sump and jacket cooling water tank.
- Necessary local thermometers for lube oil, cooling water, intake air and exhaust gas temperature reading.

3.4 Transmitters and switches for alarm and control equipment

- Lubricating oil pressure at engine inlet with automatic shutdown in case of pressure failure.
- Lubricating oil temperature at engine inlet.
- Cooling water flow at engine inlet. (With automatic shutdown in case of very high lube oil temp).
- Cooling water temperature at engine outlet.

4.0 DG SET AUXILIARIES

4.1 Fuel oil day tank

One (1) No. of day tank made out of carbon steel material shall be provided. The tank shall be provided with necessary nozzles for fuel oil filling, recirculation, outlet, drain, over flow, manhole, level gauges, high and low level switch and temperature sockets, etc. Interconnecting pipes from fuel tank to diesel engine shall be provided with necessary strainers and filers**.**The tenderer shall provide reusable mesh filter to remove dust particles in addition to main fuel oil filter mounted on the DG set.

4.2 Fuel Piping

Complete fuel supply and return piping shall be provided with necessary valves, instruments and accessories.

4.3 License for storage and transfer of fuel oil

The tenderer shall submit necessary drawings and documents and obtain license covered under 'the Petroleum Act,1934' and subsequent amendments from Chief Controller of Explosives for storage and handling of HSD. Necessary licensing fee will be reimbursed by Purchaser. All statutory approvals required shall be obtained by Tenderer wherever applicable.

4.4 Charge air system

Charge air filter to protect the engine against impurities in the inlet air and charge air silencer to reduce the air intake noise from the engine shall be provided. Vertical weather louver shall be provided to protect the air inlet to the filter against rain.

4.5 Starting air system

The engine shall be started by means of compressed air. Adequate capacity of compressor shall be provided. Engine shall be provided with air bottle(s) to store the air required for minimum six(6) start-ups.

4.6 Cooling System

Radiator type cooling system shall be provided for cooling the cylinder heads, cylinder liner and lubricating oil.

4.7 Exhaust piping & chimney

Exhaust gas from the engine shall be discharged at the required height through exhaust gas silencer and carbon steel chimney of 30 m height. Expansion bellows shall be provided to isolate exhaust ducting from vibration and allow for thermal expansion. The total exhaust pipeline system shall be insulated by wool/chicken mesh and provided with aluminium cladding to entire length**.**

4.8 Lube Oil System : Tenderer shall provide required lubrication for all moving part on the engine. Engine related lubricating oil system, filtration of the lubrication oil and other plant related lubricated oil system shall be provided.

4.9 Supports / Platform

Ladder for checking fuel oil tank level, exhaust supports**,** miscellaneous item**,** instruments etc**.** shall be provided**.**

5.0 11 KV DG-VCB PANEL

5.1 **General**

i) One (1)) No. of floor mounted, indoor totally enclosed, metal clad**,** dead front cubicle**,** fully interlocked fabricated out of 2 mm thick CRCA sheet steel confirming to degree of protection of enclosure to IP 54, housing draw out type vacuum circuit breakers**,** controls**,** metering**,** protection etc. Short time withstand capacity of breaker panel shall be of 26.2 kA for 3 sec.

ii) The maximum operating height of devices on the panel shall not exceed 1900 mm. All relays**,** instruments**,** meters**,** push-buttons**,** switches and other devices shall be located on the respective panel only**.**

iii) Suitable rated lead acid sealed & maintenance free type batteries and battery charger with leads and terminals shall be considered for the control power supply of 110 v DC and auxiliary power supply of 240 v AC shall be tapped from existing source at MRS .

5.2 **11 kV Circuit-Breakers**

5.2.1 Circuit-breakers shall be of tested and proven design and of robust construction. No part of the circuit breaker or any other part of the equipment carrying the fault current or any supporting structures shall be unduly strained or damaged when making or breaking the specified fault current.

5.2.2 All current carrying parts of the circuit breaker shall be of adequate size. The circuit breaker will satisfactorily interrupt low value, low power factor, inductive and capacitive current.

5.2.3 The transient voltage surges produced by the circuit breaker due to wave chopping during rapid interruption of inductive circuit shall be within the allowable limit. Suitable surge absorbers shall be provided to limit / restrict the transient over voltage.

5.2.4 Circuit breaker shall operate as one complete three phase unit with minimum vibration. The arrangement shall allow for easy access to all contacts for inspection, repair and replacement. Insulating barriers and arc control devices shall be of approved material not affected by tropical climate. To reduce pressure build-up inside the enclosure, pressure relief devices shall be provided.

5.2.5 Circuit breaker shall be provided with necessary auxiliary switches for indication, control, interlocking, protection and other purposes. Four spare sets of auxiliary contacts, two normally closed and two normally open shall be left free in each unit wired up to the control cable terminal board. The auxiliary contacts shall be mounted in an accessible position. If contact multiplication is required, CB Normally open (N.O)auxiliary contacts shall only be used along with auxiliary relays.

5.2.6 Vacuum circuit-breaker shall consist of three separate identical phase units coupled to one another and to the operating mechanism by self-aligning rotary operating shaft.

5.2.7 Each circuit-breaker shall have shunt trip device and shall be provided with 'ON' and 'OFF' position indicators and operation counter.

5.3 Circuit-breaker Operating Mechanism

5.3.1 The circuit-breaker shall be electrically operated. Only well tried out and robust operating mechanism which is proven and tested for frequent operations shall be provided. When required to mechanically interlock the operation of the circuit breaker with other apparatus the interlock provided shall be in the form of properly numbered keys.

5.3.2 Electrical operation of circuit-breakers shall comprise electrical motor wound spring actuated mechanism complete with motor, opening spring, closing spring and all necessary accessories. Mechanism shall be so designed as to enable a continuous sequence of circuit-breaker opening and closing operations to be obtained by the control switch as long as power is available to the motor and at least one circuit breaker opening and closing after failure of power supply to the motor.The operation of the circuit-breaker shall be independent of the motor which shall be used solely for the purpose of compressing the closing spring. The closing action of the circuit-breaker shall compress the opening spring to be ready for tripping. The control system shall be designed for operation with 110 v DC.

5.3.3 The circuit-breaker shall be provided with manual button for emergency tripping and testing purposes.

5.3.4 The operating mechanism of the circuit-breaker shall be of anti-pumping type. It shall be trip-free under every method of closing. The circuit-breaker shall have shunt trip device and the trip coil shall be designed to operate satisfactorily when the voltage at the terminals of the coil is between 70 and 110 per cent of the rated control power supply voltage.

5.3.5 The circuit-breaker mechanism shall make one complete closing operation, including automatic cut-off of closing power, after a closing command has been initiated and the first device in the control scheme has responded even though the

contacts of the initiating device are opened before the circuit breaker closing operation is completed.

5.3.6 The cable termination for VCB Panel shall be fully contained within the cubicle forming an integral part thereof mounted in the rear and shall be freely accessible for cable connection. Where more than one cable to be terminated, the arrangement shall permit connection and disconnection of individual cables separately without disturbing the other cables.The cable termination chamber shall have adequate space for termination of the required number, type and size of cables and shall be provided with suitable bracings so that the weight of the cables do not unduly stress the terminals.

6.0 CURRENT TRANSFORMERS

6.1 Rated current of all secondary windings of CTs shall be1A. For differential protection class PS CTs shall be provided with adequate knee point voltage.

6.2 The terminals of primary and secondary windings shall be marked clearly and indelibly either on their surface or in their immediate vicinity and terminal markings shall be in accordance with the applicable standard.

6.3 The CTs will have insulation level and thermal and dynamic ratings corresponding to that of the circuit breaker or isolator with which these are associated. Short time rating of 26.2 kA for 3 sec. shall be considered for CTs.

6.4 The CT cores shall have adequate volt-ampere output to suit the secondary burden imposed by the connected instruments, relays and leads. The volt-ampere output shall be selected from the standard values of 10 VA, 15 VA and 30 VA,depending on the specific requirement with provision for connection of 25% additional burden in future.

6.5 The accuracy limit factor for all CT cores for protective relaying shall be 10. The CT cores for general protective relaying will have accuracy class 5P and those for differential and pilot-wire relaying will have accuracy class PS having knee point voltage suitable for the specific application.

6.6 The CT cores for measuring and indication will have accuracy class of 0.2 and shall saturate at a moderate over current so as to relieve the measuring and indicating instruments of any undue strain caused by heavy over currents in the primary circuit.

6.7 Separate CT cores shall be used for protection and measurement.

7.0POTENTIAL TRANSFORMERS

7.1 All PTs shall be single-phase type and will have secondary rating of 110 v.

7.2 The PTs shall have insulation level corresponding to the switchgear with which these are associated.

7.3 The PTs for indoor switchboard shall be draw-out and protected by suitable HRC fuses both on the primary and secondary sides.

7.4 The PTs shall have 25 per cent additional VA capacity over and above that required for meters relays and instruments connected initially. The accuracy class of PTs shall be 1.0.

7.5 The VA rating of the PTs shall be selected from following standard values of 50 VA, 100 VA, 200 VA and 500 VA.

8.0 CONTROL, INDICATION AND ALARMANNUNCIATION SYSTEM

8.1 For 11kV switchboard, a separate metering chamber shall be provided in the front of the switchboard just above the circuit-breaker compartment. Meters,relays, control switches, indication lamps and annunciation facia shall be mounted on the hinged door of the metering chamber.Each circuit-breaker shall be provided with ON (Red) OFF (Green) AUTO TRIP, Trip-circuit healthy and spring charged(Amber) indication lamps. All indication lamps shall be of LED type. All PTs shall be provided with three (3) red indication lamps for the three phases for each core. All circuit-breaker shall be provided with trip-neutral close spring return control switches. All breaker to be remote controlled shall be provided with local /Remote selector switches.

8.2 Breaker Safety Interlocks:

The breaker compartments shall be provided with all necessary interlocks designed to prevent incorrect operation so as to ensure safety of operating personnel and also the equipment including the following:

(i) It shall not be possible to move the truck from the 'Isolated' to the 'Service' position unless low voltage plug and socket connections have been made.

(ii) It shall not be possible to disconnect the low voltage plug and socket as long as the circuit breaker truck is in 'Service' position.

(iii) It shall not be possible to withdraw the truck past the 'Isolated' position without disconnecting the low voltage plug and socket. However additional flexible jumper with plug and socket will also be provided to permit testing of the breaker outside the panel.

(iv) It shall not be possible to move the truck from the 'Service' to the 'Isolated' position or vice-versa with the circuit-breaker in the 'ON' position.

(v) It shall not be possible to switch on the circuit breaker when the truck is in between the 'Isolated' and the 'Service' position.

(vi) It shall not be possible to move the truck from the "isolated" to "Service" Position with the earthing switch in the "ON" position.

(vii) It shall be possible to switch-on the earthing switch only when the truck is in the "Isolated" position in case in-built earthing switch is provided.

(viii) It shall not be possible to open the panel front door when the breaker is 'ON' or have access to any part of the draw-out assembly which is live when the circuit-breaker is in the 'Service' position.

9.0 PROTECTION

9.1 **General**

9.1.1 Generators shall be provided with microprocessor based comprehensive generator protection relay taking care of all protections and safety requirements.

9.1.2 All high voltage power distribution systems shall be complete with necessary protection equipment to ensure effective and reliable protection.

9.1.3 All protective and auxiliary relays and associated accessories shall be furnished complete in all respects to suit the requirement of protection, interlock, control, indication and annunciation for individual applications. Trip circuit supervision relay shall be Electro-mechanical type. The Tenderer shall co-ordinate the characteristics of all relays and select their ranges to suit the system and equipment to be protected.

9.1.4 All voltage relays shall have sufficient thermal capacity for continuous energisation. The short-time rating of current relays shall be consistent with the maximum fault current in the respective CT secondary circuit.

9.1.5 Trip-circuit supervision shall be provided by relays to indicate healthiness of trip-circuits and trip supply of circuit-breakers in service position.

9.2 Main Bus bar

9.2.1 The bus bars shall be Triple Pole (TP), E91EWP grade aluminium**.** The bus bars shall be of adequate mechanical strength and so arranged and supported that the permissible clearance is maintained under all services conditions including short-circuits**.** It shall be insulated for rated voltage**.**

9.2.2 The continuous and short-time current ratings which the bus bars are able to withstand shall be as shown in single line diagrams for various boards enclosed along with this specification.

9.2.3 The bus bars shall be of uniform cross-section, which shall be so selected that with the passage of normal rated current at rated frequency, the temperature rise of the busbars does not exceed 35^0C over an ambient of 50^0C.

9.2.4 Busbars (TP) shall be colour marked as follows**:**

Phase (R) - Red
Phase (Y) - Yellow
Phase (B) - Blue

9.3 Control Power Supply

240 v AC auxiliary supply and 110 v DC control supply shall be provided in DG breaker panel**.** Suitable rated lead acid sealed & maintenance free type batteries and battery charger with leads and terminals shall be considered for 110 v DC control supply.

9.4 Instruments and Meters

9.4.1 All instruments and meters shall be of robust design**,**vibration proof**,** housed in dust-proof casing and suitable for flush mounting on vertical panels**.** They shall

be mounted in front of the panel at a suitable height to facilitate easy access and visibility. The instruments shall be of parallax-free design and shall have glare-free front covers. Marking of the scale of all instruments shall be such that it is suitable for direct reading. All indicating instruments shall be magnetically screened. The instruments and meters shall be capable of carrying the CT secondary current under fault condition for the specified period without any damage.

9.4.2 VCB incomer shall be provided with a 144mm X 144mm ,0 to 12kV voltmeter and a 3-position selector switch on the line side of the concerned breaker for indicating the three phase voltages, complete with voltmeter fuses.

9.4.3 VCB incomer shall be provided with HT 144mm X 144mm ammeter of suitable range and a 4-position selector switch complete with CTs for measuring the currents in all the three-phases.

9.5 11 KV and 1.1 KV Grade Power & Control Cables

9.5.1 The cables shall be designed, manufactured and tested in accordance with the relevant standards of the Bureau of Indian Standards in order that specific aspects under Indian conditions are taken care of.

9.5.2 Materials and workmanship shall be of good quality suitable for the purpose intended and in accordance with the highest standards and code of practices for cables of the class covered in the specification.

9.5.3 The HT/LT power cables and control cables shall be capable of operating at the required capacity in ambient air temperature of 50 deg C maximum and 45 deg C average over 24 hours and ambient ground temperature of 30 deg C.

9.5.4 The cables shall be designed to withstand the operating conditions in the plant and the atmospheric conditions at the site as mentioned.

9.5.5 The cables shall generally be laid exposed on brackets, cable trays, racks/hooks in concrete trenches etc. as well as buried on ground as the case may be.

9.5.6.1 HT XLPE cables

9.5.6.1 The 11 kV power cables shall be of aluminium conductor, cross linked polyethylene insulated, screened, FRLS PVC sheathed, armoured type. The cables shall be designed, manufactured and tested in accordance with IS: 7098 (Part-II).

9.5.6.2 The conductor shall consist of electrical purity stranded aluminium wire having requisite mechanical properties to ensure the desired tensile strength as well as flexibility etc as laid down in IS:8130.

9.5.6.3 Colour coding shall be Red Yellow and Blue.

9.5.6.4 The cable construction shall have in general conductor screening, XLPE insulation, insulation screening, laying up of cores, thermoplastic fillers, PVC inner sheath (extruded “ST2” type), armouring and PVC outer sheath (extruded “ST2” type). The materials used and the assembling/manufacturing shall conform to IS 7098 (Part-II). The conductor screening and non-metallic part of insulation screening shall be provided by extrusion of semi conducting compound. The

metallic part of insulation screen shall comprise copper tape, cross sectional area of which shall be calculated on the basis of its width, thickness and layers. The screen cross-section shall be selected considering allowable maximum screen temperature not exceeding 200 deg C during earth fault.

9.5.6.5 The PVC compound for sheathing shall conform to IS:5831. The colour of outer sheath shall be black.

9.5.7 1.1 Kv grade Power and Control Cables

9.5.7.1 The XLPE insulated, FRLS PVC sheathed armoured heavy duty power cables shall be of 1100 v grade with aluminium conductor designed, manufactured and tested in accordance with IS: 7098 (Part-I) and as per the latest amendment.

9.5.7.2 Core identification shall be provided by different colouring of PVC insulation. Following colour scheme shall be adopted for the power cables.

3 core - Red, Yellow and Blue
3 ½ core - Red, Yellow, Blue and Black
4 core - Red, Yellow, Blue and Black

9.5.7.3 The cross-sectional area of neutral conductor of multicore power cables shall constitute about 50 per cent of phase conductor for cable having cross-sectional area of 25 sq.mm and above. For cables below 25 sq. mm the neutral conductor shall be of same cross-sectional area as the phase conductor. All power cables shall be of stranded type for all the sizes covered under this specification.

9.5.7.4 The XLPE insulated, PVC sheathed armoured heavy duty power cables shall be of 1100 V grade with aluminium conductor designed, manufactured and tested in accordance with IS-7098 Part-1and as per the latest amendment.

9.5.7.5 The control cables shall be multi-core, heavy duty type, PVC insulated, PVC sheathed (type ST1, extruded),1100 V grade, armoured having number of cores of 3,5,7,10,14,19,27 and 37 with copper conductors. The control cables shall be designed, manufactured and tested in accordance with IS: 1554 (Part-I) and as per the latest amendment. The cross sectional area for the control cables shall be 2.5 / 1.5 sq. mm with copper conductor. All control cables shall be of stranded type. The armouring where called for shall be galvanized steel round wire type.

9.5.7.6 The 2 core copper power cables shall be 1.1 kV Grade and shall comprise tinned, annealed, stranded and flexible copper strands as conductors conforming to Class-5 as per IS 8130. The cable shall fully conform to IS 1554 for general design and construction.

9.6 Cable Termination for DG Auxiliaries

The HT cable terminal arrangement for 11kV (UE) shall be housed in separate cable compartments and shall be suitable for single-core and multi-core aluminium conductor XLPE insulated, screened FRLS, PVC sheathed, armoured cables**.** The cable termination compartment shall be provided with suitable removable cover plates at the bottom as required with holes drilled for cable entry**.** Wiremesh/transparent acrylic coating shall be provided for cable end termination to avoid inadvertent contact with live bus.

9.8 VCB Circuit-Breaker Handling Truck

The 11 kV vacuum circuit breaker handling truck wherever required shall have platform of adequate mechanical strength for bearing the weight of the circuit-breaker unit and shall be provided with necessary guide rails and stops. The height of the platform shall be adjustable to suit the levels at which the circuit-breaker is mounted on the switchboard.

10.0 DG CONTROL PANEL

10.1 The DG set breaker panel shall be controlled from Local/Remote DG control panel. The DG control panel shall be of dust & vermin proof, indoor, floor mounted, fabricated out of2mm thick CRCA sheet steel confirming to IP-54 degree of protection for enclosure.

The DG local control panel located near DG HV panel shall comprise but not limited to the following indications:

- Microprocessor based Alarm / Annunciator (with 20% spare windows for each DG set with RS485 MODBUS feature).
- AVR & Excitation controls.
- AMF system
- Controls (for Engine, breakers)
- Protective relays.
- Battery Charger
- Indicating and integrated meters.

Required facia type microprocessor based annunciators will be provided on the top front side of the panel with alarm and indication for monitoring the various parameters of diesel engine,generator and their auxiliaries. The control panel shall accommodate the logic control equipment for the automatic starting system. In addition,necessary control switches/push buttons, local/remote selector switches shall be provided for the manual starting and stopping of the generator sets and auxiliaries. The AMF control system built on voltage, control and time relays shall sense loss of voltage of normal power. The under voltage relays through time relays shall initiate command for starting the engine which shall persist for a suitable time interval.In case the engine fails to start on the first impulse, successive impulses shall be applied after suitable time delay which shall be adjustable. If the engine fails to start after applying five consecutive starting pulses, no further auto starting shall be permitted. An audio visual alarm shall be initiated to annunciate the 'AMF Fail' condition. The AMF control system shall have an auto/manual selector switch and Engine Start/Stop push buttons for manual control. The generator voltage regulator control shall also have facility for manual control selectable using an Auto/Manual selector switch. Necessary potentiometer/Raise-lower pushbutton control shall be provided for manual adjustment of generator excitation.The battery charger used for keeping the starting battery always charged shall be of solid state design with facility for float charging and boost charging; selectable through a mode selector switch. The charger shall have facility for regulating the charging current automatically to prevent over charging.

10.2 Auto Mains Failure (AMF) System

Incase of power failure DG shall start automatically through AMF within 30 secs.

11.0 **Change over Switch and its Connection:**

11 KV, 630A change over switch to be installed in the existing 2 pole structure in 33/11 kV yard outside main receiving station. As the 11 KV VCB will be installed in existing MRS switch board, HT cable from DG set 11 KV output to VCB incoming at MRS and 11 KV VCB output to Change over switch incoming (approx 100 mtrs as per site conditions) is to be considered.

12.0 **CABLE TRAYS**

GI cable trays & supports as required within DG room shall be considered in the scope of tender. Ladder type cable trays shall be used for routing power cables and perforated types trays shall be used for routing control/instrument /data cables.

The width of GI cable trays shall be, 300/450/600 mm. The cable tray supports shall consist of vertical and horizontal members 50x50x6 angles. A min of 250mm spacing shall be considered between layers of cable trays.

13.0 **COMMISSIONING TESTS**

13.1 Testing of various equipment shall be carried out to ensure that they are in satisfactory condition and will successfully perform the functional operation. All tests shall be carried out by the Tenderer using his own instruments, testing equipment as well as qualified testing personnel.

13.2 The following pre-commissioning tests/checks shall be performed after installation.

- Check for proper installation, alignment etc.
- Check for foreign bodies/defects or damages and removal/rectification as required.
- Check for free movement of rotating parts.
- Check for proper tightness of electrical connections.
- Check for proper lubrication, level of cooling water,fuel and lubricating oil and topping up as required.
- Check for electrolyte level in batteries and topping up as required.
- Check for continuity of electrical interconnections and functional check of control circuits.
- Check for proper setting of relays and protective devices.
- Check for proper earthing of generator neutral and earthing of all equipment.

13.3 The tests to be carried out on equipment shall include the following :

- Insulation resistance test on alternator.
- No load and load test.
- Functioning of over speed and other safety devices.
- Functioning of governing system.
- Functioning of AVR equipment and AMF starting system.
- Functioning of battery charger equipment.

14.0 PERFORMANCE GUARANTEE FOR DG SET

14.1 The performance of the DG set shall be guaranteed by the supplier. The Contractor will necessarily have to achieve the parameters guaranteed. In the event the Contractor is unable to demonstrate the guaranteed parameters even after 90 days of notice, the Purchaser may replace / modify the system to achieve the guaranteed parameters at Contractors risk and costs.

14.2 The following shall be guaranteed in respect of the DG set:

a) Specific fuel consumption in gm/kWh for 100% and 50% loading.
b) Rated output.
c) Overload capability.
d) Performance of governor and automatic voltage regulator (AVR) during sudden and step loading and load throw off.
e) Exhaust gas temperature.

14.3 The guarantee tests and tolerances permissible shall be generally in accordance with IS-10000 for the diesel engine or any other standard agreed with the Tenderer before placement of order. The generator shall be governed by relevant IS.

14.4 The Tenderer shall also furnish as a part of his offer, correction curves applicable in case the specified operating conditions are different from the operating conditions during the guarantee tests.

15.0 INSTALLATION AND COMMISSIONING

The installation work shall be carried out in a neat, workman like manner and in accordance with the best engineering practices.The equipment and installation shall conform to the latest Indian Electricity Rules as regards, safety, earthing and other essential provisions specified therein for installation and operation of electrical plants.All equipment including individual components, fittings and accessories shall be properly stored at site so as to obviate any deterioration of electrical properties and mechanical damages.All equipment shall be thoroughly cleaned of packing materials, scales, rust, oil, grease etc. prior to commencement of the installation work.All equipment shall also be checked physically for the completeness of all components and devices before taking up installation.The supplier shall repair all minor defects in the equipment, if required, prior to installation in consultation with equipment manufacturer so that manufacturer's guarantee is not affected in any way. In case of any major damage to the equipment, the same shall be rectified or replaced only by the manufacturer's representative with the approval of the Purchaser.All equipment and accessories shall be installed strictly in accordance with the manufacturer's instructions/drawings.Equipment supplied in sections or in dismantled condition shall be reassembled at site with all associated accessories as per the manufacturer's instructions.All installation work shall be planned well in advance so that all openings, sleeves, inserts, mounting channels, foundation bolts, holes etc required for the installation can be incorporated during the execution of civil engineering work. In case additional openings, chases, sleeves etc are required after completion of civil engineering work, the supplier shall make at his cost necessary arrangement for the same by drilling/cutting chases, holes etc and shall make good all damaged portions of the work.

ANNEXURE – A

LIST OF PREFERRED MAKES (other makes may also be considered)

1. Diesel Engine : CUMMINS INDIA/ CATERPILLAR/GREAVES / WARTSILA/ BHEL / VOLVO/POWERICA/MAN/PERKINS
2. Alternator : STAMFORD/CGL/VATECH/TDPS
3. AVR : BHEL/ABB/SIEMENS
4. PTs & CTs : ABB/AUTOMATIC ELECTRIC/ KAPPA/PRAGATI
5. Protection & Auxiliary Relays : ALSTHOM/ABB/SIEMENS
6. Meters : IMP/RISHAB
7. DG Control Panel: SIEMENS/AREVA / ENPRO
8. Tri-Vector Meter (with modbus protocol) : L&T
9. Axial Fan/Exhaust Fans: ACCO, ABB, C.DOCTOR, DUVENT,KHAITAN
10. HT cables : RPG/UNIVERSAL/TORRENT/KEI/Crystal/CCI/NICCO/UNIFLEX/ INCAB/POLYCAB
11. Recorders **:** YOKOGAWA INDIA LIMITED/LAXONS(CHINO)/DIGITAL/ABB/
12. Annunciator unit**:** PROCON/MINILEC/IIC/ACC SYS
13. Control desk **:** ICA/ RITTAL / RKC / SIMCON / PYROTECH / SYSPRO
14. Flow elements **:** MICROPRECISION/BALIGA/ASIAN/ INDUSTRIAL VALVES & INSTRUMENTS
15. Temperature gauges : H.GURU/GENERAL INSTRUMENTS/WIKA /WAREE
16. Pressure gauges **:** H.GURU/GENERALINSTRUMENTS/A.N.INSTRUMENTS/ PRICOL/ WIKA/ WAREE
17. Level gauges **:** LEVCON/T.M.TECHNOMATIC/PLACKA TECHTREL
18. Pressure transmitter **:** EMERSON/YIL/ HONEYWELL /ABB/E&H
19. Flow transmitters **:** EMERSON/YIL/ TATA HONEYWELL/ABB/ E&H
20. Temperature transmitters**:** EMERSON/ABB/TATA HONEYWELL/YIL/ E&H

21. Temperature elements : GENERAL INSTRUMENTS/PYROTECH/NAGMAN/TOSHNIWAL INDUSTRIES/ALTOP/TEMPSONS
22. Pressure switches: SWITZER/INDFOSS/VARMA TRAFAG
23. Level switches : LEVCON/SAPCON/V. AUTOMAT &INSTRUMENTS/
24. I/P converters : ROSEMOUNT/SHREYAS/MOORE/MTL
25. Solenoid valves : ASCO/AVCON/ROTEX
26. Instrument cables: DELTON/PARAMOUNT/THERMOPADS/TOSHNIWAL/TCL
27. LT Power cables : RPG/UNIVERSAL/CCI/NICCO/TORRENT/INDUSTRIAL/ POLYCAB/ FINECAB/INCAB/RADIANT/CRYSTAL /KEI/SPECIAL/RAVIN/HAVELLS
28. Control cables : RPG/UNIVERSAL/NICCO/TORRENT/INDUSTRIAL/ POLYCAB/ DELTON/CCI/CORDS/SPECIAL/CAPCAB/ FINECAB/RADIANT/ INCAB/ CRYSTAL/LAPP/Thermopads /KEI/RAVIN/HAVELLS

ANNEXURE-B.1 **ANNEXURE-B**

FORMAT FOR ITEMISED PRICE LIST FOR TWO (2) YEARS SPARES

Price (Ex-works)

Sl.No	Spare Parts	Qty	Unit(Rs.)	Total(Rs.)

ANNEXURE-B.2

FORMAT FOR ITEMISED PRICE LIST FOR TOOLS AND TACKLES

Price (Ex-works)

Sl.No	Spare Parts	Qty	Unit(Rs.)	Total(Rs.)

ANNEXURE – C

INDICATIVE BOQ FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 1500 KVA DG SET AND ACCESSORIES

Sl.No	Item Description	Unit	Qty
1.0	Diesel engine of suitable BHP and accessories complete with fuel, intake air, engine cooling system, exhaust gas, compressor starting system, engine control panel with instruments and controls, pipes & fittings within battery limit etc	Sets	1
.2.0	HSD day tank, oil supply pumps and filter unit along with with supply and return pipe work and its Supporting structures including obtaining license from Chief Controller of Explosives.	Sets	1
3.0	Corton steel chimney with supporting structures	Set.	1
4.0	Alternator, 1500 KVA, 0.8 pf, 11 Kv, 3 ph, 4 wire, Brushless, 50 z, self excitation, class F, IP-54 and all other accessories	Nos.	1
5.0	11 kV DG VCB Panel with 110 v DC battery, battery charger & all accessories	Set	1
6.0	11 kV (UE) and 1.1 kV power and control cables along with cabling accessories including equipment earthing	Set	1
7.0	Siemens make 11 Kv, 630 A VCB type 3AH5 along with Protection relay to be mounted in the existing board	Set	1
8.0	11 Kv, 630 A, outdoor duty change over switch	No	1

9.0 Suitable acostic enclosure for DG set	No	1
10.0 DG local control panel of dust & vermin proof, floor mounted, sheet steel cubicle, IP54,comprise - Engine control start /stop, speed raise/ lower, test emergency stop, RPM meter, counter etc. - Breaker controls, protection relays - Meters , Indications - Alarm annunciation system solid state type - Battery charger - AMF system with base frame, anti-vibration pad and all accessories.	Set	1
11.0 GI cable trays and vertical & horizontal supports as required	Lot	1
12.0 Earthing of DG set neutral and other accessories within DG Island along with earthing station	Lot	1
13.0 Civil works including foundation	Lot	1

ANNEXURE-D

QUESTIONNAIRE

The tenderer shall fill this questionnaire and submit with each copy of his offer**.** This information is required in this form to facilitate tender processing even though it may be a duplicate information presented elsewhere in his offer**.** This data presented herein shall form a part of the contract with the successful Tenderer**.** This questionnaire does not supersede instructions in the tender documents relating to the descriptive information to be submitted with the offer for a complete understanding of the equipment offered and its operation**.**

1.0 GENERAL

1.1 Total estimated shipping weight of DG set**,** tons **:**
1.2 Overall dimensions of the set
1.3 Weight of heaviest single item **:**
1.4 Hoist travel required **f**or maintenance :
1.5 Previous experience**,** list of similar plant / equipment supplied , **:** Enclosed / Not enclosed
year of supply**,** name of purchaser etc (Tenderer shall enclose separately)
1.6 Special transport requirement**,** if any **:**
1.7 Special storage requirement**,** if any **:**
1.8 List of deviations from tender documents **:** Enclosed / Not enclosed
1.9 Requirement of utilities and services for regular operation :
1.10 Requirement of auxiliary electric power of for regular operation**,** kW :
1.11 List of auxiliaries for which a power allowance has been made in the maker's site rating and which are necessary for running of the DG set :
1.12 List of other auxiliaries stating the power and voltage required for each

(whether driven by DG or independently)

2.0 GUARANTEED PERFORMANCE DATA

2.1 Net continuous power output at generator terminals, Kw :
(at reference conditions)
Overload capacity in every 8 hours of continuous operation.
Specific Fuel oil consumption, gm/kWhr
- at 100% load :
- at 75% load :
- at 50% load :

Governing parameters (as per IS-10000)
Variation in AVR voltage control under all possible load ranges.

2.2 Other Utility Data

Lubricating oil consumption at 100% , 75% , 50% load, gm/kWhr
Cooling water consumption (make-up) lit/hr
Heat rejection to ambient, Kcal/kWhr :

3.0 DIESEL ENGINE AND ACCESSORIES

3.1 Diesel Engine

Make :
Type / Model :
Design standard :
Number of cylinders :
Cylinder diameter (bore), mm :
Stroke, mm :
Swept volume, Cu m/cylinder :
Speed, rpm :
Compression ratio :
Firing order :
Direction of rotation :
Mean piston speed, m/s :
Output at normal conditions, BHP :
Derated output for site conditions :
Allowable percentage of overload and duration :
Brake mean effective pressure (BMEP), kg/sq cm :
Type and details of governing system :
Anticipated noise level of the engine at 1 M distance, dB (A) :
Vibration level of the engine, microns :
Details of vibration damper provided, if any :
Overall assembled dimensions of engine (L x B x H), M :
Weight of the engine, Kg :
Weight of single component to be handled during normal maintenance
(indicate name of component), tons
:

3.2 Air Intake System

Furnish details of air intake system :

3.3 Fuel System

3.3.1 Fuel consumption
- Hourly maximum :
- Annual :

3.4 Day tank
- Capacity :
- Material :

3.5 Fuel intake pumps
- Type :
- Number :
- Capacity :
- Pressure :
- Material :

3.6 Fuel intake Filters
- Make (Automatic/ manual) :
- Type and description :
- Number :
- Capacity , litres / min :
- Filtration Efficiency :
- Particle Size , microns :
- Allowable differential pressure :

3.7 Exhaust Gas System
Details of exhaust pipe (size and material) :
Number and material for silencer and expansion bellow :
Exhaust gas temperature at maximum ambient temperature, 0 C :
Exhaust gas characteristics :
Type of Chimney :
Chimney Height :
Chimney Diameter :

3.8 Turbo Charger
Make and Model No. :
Details of bearings and bearing cooling :
Charge air cooler, Type & material :

3.9 Lubricating Oil System
3.9.1 Type of system :
3.9.2 Grade of lube oil :
3.9.3 Annual consumption, kl :
3.9.4 System hold up, litres :
3.9.5 Lube oil supply pressure, Kscg :

3.10 Lubricating oil pumps (engine shaft driven)
- Type :
- Number :
- Capacity, litres/min. :
- Speed, rpm :

- pressure :

3.11 Pre-lubricating oil pump
- Type :
- Capacity, litres/min. :
- Total head, mlc :
- Speed, rpm :
- Motor rating, kW :
- Type of shaft sealing :

3.12 Oil Coolers
3.12.1 Make :
3.12.2 Type and description :
3.12.3 Number :
3.12.4 Capacity, Kcal/hour :
3.12.5 Design code :
3.12.6 Cooling water :
- Flow rate, litres/min. :
- Temperature rise, ^{0}C :

3.13 Oil Filters
3.13.1 Make :
3.13.2 Type and description :
3.13.3 Number :
3.13.4 Capacity, litres/min. :
3.13.5 Filtration efficiency, % :
3.13.6 Particle size, microns :
3.13.7 Allowable differential pressure :

3.14 Cooling Water System
3.14.1 Jacket cooling water system
Type of system :
Storage requirement :
Quantity of water in circulation :
Make-up water requirement :
Type and details of cooler :
Make :
Type and description :
Number :
Capacity, Kcal/hour :
Design code :
Cooling water :
- Flow rate, litres/min. :
- Temperature rise, ^{0}C :
Number, type and details of circulation pump(s) :
Details of anti-corrosive agents recommended, if any :

4.0 STARTING SYSTEM (Compressed Air System)
Compressor :

Type **:**
Capacity **:**
Number **:**
Pressure **:**

4.1 Starting Air Bottles

Storage volume **:**

5.0 PIPEWORK AND INSULATION

5.1 Details of pipe work covering material specifications**,** dimensional**,** fabrication and testing standards shall be furnished service-wise for different conditions of temperature and pressure :

5.2 Schedule for pipes**,** valves**,** fittings and supports shall be furnished service-wise for different conditions of temperature and pressure :

- Pressure, kscg **:**

6.0 GENERATOR

6.1 Make & Type **:**
6.2 Standards followed **:**
6.3 Rated KVA/kW and overload capacity :
6.4 Momentary peak overload capacity**,** kW
6.5 Rated Voltage **:**
6.6 Rated current **:**
6.7 Synchronous speed**,** rpm **:**
6.8 Synchronous reactance / sub-transient reactance :
6.9 Rated power factor **:**
6.10 Regulation **:**
6.11 Efficiency **:**
6.12 Excitation current and voltage at rated output :
6.13 Type of excitation offered with technical particulars :
6.14 Insulation and temperature rise **:**
6.15 Type of enclosure and ventilation **:**
6.16 Degree of Protection**,** IP-54 **:**
6.17 Method of cooling **:**
6.18 Cable terminal arrangement **:**
6.19 Descriptive literature for automatic voltage regulators :
6.20 Make and type of protection relays offered :
6.21 Maximum percentage of unbalance permissible on generator :
6.22 Maximum size of motor which can be started DOL within permissible limit of voltage dip :
(limitation of engine in starting the motor also to be indicated)
6.23 Maximum time from starting Impulse after which power can be put on generator :
6.24 Dimensions (L x B x H)**,** M **:**
6.25 Weight**,** Kg **:**

7.0 DG SET

Type of base frame **:**
Details of coupling **:**
Overall dimensions**,** L x B x H **:**
Weight **:**
Space requirement **:**

8.0 DG CONTROL PANEL Local/Remote

8.1 Make & Type :
8.2 Detailed write-up on :
- Type and response of automatic voltage regulator :
- Type of battery charger provided :
- Type of excitation system :
- Details of indications :
- Details of protection :
- Details of annunciation :
8.3 Details of battery :
8.4 Other control circuit details :
8.5 Dimensions (L x B x H), M :
8.6 Weight, Kg :

9.0 INSTRUMENTATION AND CONTROLS
9.1 List, make and type of all field instruments :
9.2 Details of the recommended control system :
9.3 Details of the recommended protection and interlocking envisaged for the generator and auxiliaries :

10.0 11kV DG BREAKER PANEL
10.1 General
10.1.1 Make :
10.1.2 Standards followed :
10.1.3 Rated voltage :
10.1.4 Continuous current rating of busbars at specified ambient Temp., while installed in Switchboard :
10.1.5 Material of busbars :
10.1.6 Nominal cross-section of busbars, sq mm and Overall derating factor applied :
10.1.7 Short-time current rating, kA and duration in secs. :
10.1.8 Sleeving of busbars :
10.1.9 Degree of protection of enclosure IP No. :
10.1.10 Overall dimensions (L x B x H), mm :
10.1.11 Weight, tons :
10.1.12 Total DC current (peak, average) requirement for battery sizing in Amps :
10.2 11 kV Circuit Breakers
10.2.1 Make :
10.2.2 Standards followed :
10.2.3 Manufacturer's type designation :
10.2.4 Dimensions and weight of each complete unit, mm & kg :
10.2.5 Nominal current rating in ampere
a) Continuous (RMS) :
b) Short-time (time to be stated) :
10.2.6 Derating factor for specified Ambient temperature and IP54 Enclosure :
10.2.7 Interrupting capacity
a) Symmetrical, kA :
b) Symmetrical, MVA :
10.2.8 Making current, kA (peak)
10.2.9 Short circuit type test certificate No. (Photostat copy to be Enclosed) :
10.2.10 Insulation level of the breaker :
10.2.11 One-minute dry power frequency test withstand stage, kV :

10.2.12 Type of main and arcing contacts **:**
10.2.13 Whether contacts are silver plated **:**
10.2.14 Type of closing mechanism **:**
10.2.15 Power required by closing coil and voltage supply required with tolerance **:**
10.2.16 Total closing time from closing coil energisation **:**
10.2.17 Power required by shunt trip coil and voltage of supply required with tolerance **:**
10.2.18 Enclose detailed catalogue for the Circuit breaker **:**

10.3 Protection

10.3.1 Microprocessor based (numerical) relays:
Tenderer to indicate different protection functions provided with settings and catalogues for relay model **:**

10.4 Current Transformer

10.4.1 Make and Model No**. :**
10.4.2 Standards followed **:**
10.4.3 Class of insulation **:**
10.4.4 One-sec**.** short-time current**,** kA **:**
10.4.5 Dynamic current rating**,** kA **:**
10.4.6 Ratio **:**
10.4.7 VA burden **:**
10.4.8 Accuracy class **:**

10.5 Indicating Instruments

10.5.1 Make and Model No**. :**
10.5.2 Type **:**
10.5.3 Size **:**
10.5.4 Accuracy **:**

10.6 Earthbus

10.6.1 Size **:**
10.6.2 Material **:**

10.7 Control and Aux. Power Supply

10.7.1 Control voltage (110V DC) **:**
10.7.2 Aux**.** Power Voltage (240V AC) **:**

ANNEXURE -II

(TENDER NO.PUR.3.21.0057/0483 Dt 03.02.2014)

INSTRUCTIONS TO TENDERERS

1.0 **ESTABLISHMENT OF CREDENTIALS OF UN-LISTED VENDORS**: If a tenderer who responds to this tender is not presently enlisted with RINL / VSP, he is requested to furnish NOTORISED copies of the following documents separately in a sealed envelope super scribing "**CREDENTIALS" and the ITT REFERENCE OR ADVERTISED TENDER REFERENCE NO**. as the case maybe along with the tender:

a) Statutory Industry Registration Certificate.
b) Excise, sales Tax Registration certificates and copy of PAN Card.
c) Financial worth and audited financial statements for the last 3 years.
d) Other credentials like ISO certificate etc.
e) List of Purchase orders / contracts executed for PSUs for same or similar items.

Kindly note that the above information is required to assess the credibility of the vendor not presently enlisted with RINL / VSP. The tender of un-listed vendor shall be rejected in case of non-submission or incomplete submission of the above documents or RINL/VSP finds that the credibility of the un-listed Vendors is not satisfactory on the basis of the documents furnished. The Vendor shall furnish copies of above documents duly attested by notary and produce originals of the above documents for verification, if RINL / VSP so desires. RINL / VSP's decision in this regard is final.

2.0 **GENERAL INFORMATION / DATA / DOCUMENTS TO BE FURNISHED BY TENDERERS:**

2.1.1 Tenderers who may be AGENCY FOR Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply shall furnish information / data / documents / printed and illustrated literature / brochures covering the following aspects:

a) Detailed information of the Manufacturer along with the latest copies of the executed / ongoing orders (during the last 1 year) with different clients.
b) Documents showing the exact nature of ownership.
c) Production capacity of the subject item i.e Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply .A recent Test and Inspection Certificate (dated not earlier than one year from the date of tender) issued for the material by a reputed International test house / Government approved test house in case the tenderer is a new Supplier to RINL / VSP.

2.1.2 Tenderers who may be suppliers of Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply offering on behalf of a Principal Manufacturer, shall furnish in original the Letter of Authority of the concerned manufacture, as per the proforma at **Annexure - VI** of the Tender document, specifically authorising the said supplier to

make an offer in response to this Invitation to Tender. This Letter of Authority should be submitted along with Part - A: Techno-commercial bid

2.2 In case the Manufacturer wants to supply from their Works located at more than one place, the details of the Works should be indicated in the tender (Part-A). They should also give clear price breakup and quantities (**in Part-B: Price bid**) for supplying the material from different Works.

2.3 The tenderers are requested to fill up the check list as at **Annexure - IV** of the Tender document.

2.4 In case where RINL/VSP decides to procure the material from one or more sources (only one offer shall be submitted by companies using same equipment/Facilities/Address) and if it comes to notice of RINL/VSP at any stage during the finalization of the tender or after placement of order/execution of the contract that offers have been made by the companies using same equipment/facilities/address then such offers/orders shall be rejected/cancelled forthwith and the party(s) shall be blacklisted from all further dealings with RINL/VSP for a period of 2 years. Bid money/EMD/Security deposit etc if any shall be forfeited. Decision of RINL/VSP in this regard shall be final and binding

3.0 **SUBMISSION OF OFFERS**:

3.1.1 **QUOTING OF PRICE(S)**: The price quoted should be on FOR VSP SITE basis inclusive of freight and insurance. Taxes and duties and other statutory levies if any, to be indicated clearly. The prices shall remain firm and fixed during the period of the contract, However, any change in statutory taxes and duties shall be reimbursed at actuals during the original contractual delivery period. Any change in taxes and duties beyond the original contractual delivery period is to be borne by the Supplier. It may be noted that unit price is to be quoted both in figure and words in the format enclosed at **Annexure-III**. In case of any discrepancy between the two , the price indicated in words shall only be considered.

4.0 **TAXES, DUTIES AND LEVIES :**

4.1 Tenderers must furnish complete details w.r.t each of the quoted items about the Tariff number, applicable Excise duty rate, Education cess, Higher education cess, other Taxes, Duties, Levies, like Service Tax (ST) etc., as per the Commercial Format placed at **Annexure 2**.

4.2 Tenderers must indicate Excise Assessable value w.r.t each of the quoted items in the Price bid (format is at Annexure – 4). In case Excise Assessable value is not mentioned in the price bid, basic unit price quoted for such item(s) shall be considered as Excise Assessable value and the offer shall be evaluated accordingly.

4.2.1 If it comes to the notice of RINL/VSP at any point of time that Excise Assessable value of any item supplied by the successful tenderer against the Purchase order placed against this ITT is less than the value indicated in the price bid, payment shall be released taking such lower Excise Assessable value into consideration and no claims whatsoever on this account shall be entertained.

4.3 Wherever the tenderers quote excise duty and sales tax as `NIL' or at concessional rates (being SSI Unit or due to some other privilege available on the date of offer) but reserves the right to charge at actual on the date of dispatch, suitable loading would be done with maximum ED & ST rates as applicable.

4.3.1 Tenderer`s Central & State Sales Tax VAT Reg. No. etc. are to be necessarily indicated in the offer (Material cum Specification sheet).

4.4 In case of supervision for erection, testing & commissioning, the existing applicable service tax & income-tax percentage are to be stated separately.

4.5 The Indian Income Tax relating to rendering of supervision services at site which the employer may require by law to deduct , shall be deducted at source as per provision of Indian Income Tax Act 1961 with subsequent revision. The employer shall provide to the contractor with official tax receipt, evidence of such tax payment.

4.6 **VALUE ADDED TAX** (**VAT**): VAT in the State of Andhra Pradesh (A.P) is introduced with effect from 01.04.2005. This replaces APGST Act from that date. Tenderers from the State of Andhra Pradesh should be registered under VAT and shall confirm submission of VAT invoice to enable RINL/VSP to avail the input credit. Also, the tenderers from A.P shall indicate the TIN (Tax Identification Number) under VAT. Evaluation of such offers will be done considering this credit that would be available to RINL/VSP.

4.7 However, in case tenderers quote any other term than mentioned in this tender, the same shall be loaded as per VSP norms while evaluating their offer.

4.8 Any revised bids received after tender (techno commercial bid in two bid case) opening shall be rejected unless it has been furnished in response to a specific request from VSP.

5.0 **TERMS OF PAYMENT**:

5.1 80% payment along with taxes and duties after GARN. GARN shall be raised based on certification regarding receipt of the DG sets by DGM(Mech)/Madharam Mines and on submission of commercial invoice, packing list / Challan within 60 days credit from the date of GARN. Balance 20% is payable on satisfactory performance report from DGM (Mech)/ Madharam Dolmite Mines or his authorized representative within 30 days. Payment shall be made by NEFT/RTGS mode or such other mode of electronic fund transfer offered by banks/ Letter of Credit. In case you have not already furnished the required details, you may download the pro-forma for NEFT/RTGS in which the details are to be furnished from the VSP's website and submit along with your offer for updating our database.

5.2 The price bid should only contain the price quoted for Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply (Annexure-III) and other financial terms should be given in the techno-commercial bid and not in any other accompanying documents or statement. No extra weightage shall be given for any extra credit offered beyond ITT payment terms of 60 days interest free credit.

5.3 In case an offer with deviations to payment terms is considered, it shall be loaded suitably for the purpose of comparison with other offers. The general principle is to load for the additional financial implication to which RINL / VSP may possibly be exposed on account of such deviation. The decision of RINL / VSP in this regard shall be final. Since the deviations that might be stipulated by the tenderer cannot be foreseen, the illustration given below are not exhaustive. RINL / VSP reserves the right to load the offers at its sole discretion for other deviations also, which in the opinion of RINL / VSP, have financial implications to RINL / VSP.

6.0 **CURRENCY** : The price of Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply offered should be quoted in Indian Rupees only .

7.0 **LANGUAGE OF BID**: The offer and complete correspondence must be effected only in English language. The Bid prepared by the tenderer and all correspondence and documents relating to the bid exchanged by the tenderer and the Purchaser, shall be written only in the English language, provided that any printed literature furnished by the tenderer may be written in another language so long as it is accompanied by an English translation of its pertinent passages in which case, for purposes of interpretation of the bid, the English translation shall govern.

8.0 **VALIDITY OF THE OFFER**:

8.1 Each tenderer shall keep his offer firm and valid for acceptance by RINL till 120 days from the date of techno-commercial bid opening/reverse e-auction.

9.0 **BID MONEY/EARNEST MONEY DEPOSIT**

9.1 Each tender shall be considered only if Bid money in Indian Rupees by means of either a Cheque/Demand Draft drawn on any Scheduled Bank and payable to Rashtriya Ispat Nigam Ltd. at Visakhapatnam(subject to realization) or a Bid Bond in the form of Bank Guarantee (as per the prescribed proforma at **Annexure -V** of the Tender Documents) established in favour of RINL for an amount Rs.1,75,000 (Rupees One Lakh Seventy Five thousand only) is submitted along with or prior to opening of Part-A: Techno-commercial Bid.

9.2 The Bid Bond as mentioned above should be established either in the form of Bank Guarantee issued by any of the Nationalized Bank (whether situated at Visakhapatnam or outstation) **with a clause to enforce the same on their local branch at Visakhapatnam** or by way of Account payee Demand Draft payable at Visakhapatnam in favour of Rashtriya Ispat Nigam Limited. The Bank Guarantees from other Scheduled Banks (other than Nationalized) Banks) should however be from the branch located in Visakhapatnam. The A/c PAYEE cheque /DD/ bond established through Co-operative Banks are not acceptable. The Bid Bond should be valid till 31.12.2014. Tenders received without the Bid Bond / Bid Money of requisite value will summarily rejected. Bid money, if paid in cash, shall not accrue interest.

9.3 The Bid Money must be submitted along with or prior to opening of Techno-Commercial Bid (Part-A). Tenders received without the EMD / Bid Money of requisite value will not be considered by RINL.

9.4 The following categories are exempted from submission of EMD/Bid Money

(i) Central/State/Govt.Public Sector undertakings of India.

(ii) SSI Units/ Micro and Small Scale enterprises (MSEs) registered with NSIC/District Industries Centre of the state government concerned for the item(s)/item category of tendered item(s) for which the tenderer is registered with the respective authority.

(iii) Units registered with RINL for the tendered item(s).

SSIs/MSEs and units registered with RINL needs to submit notarized copies of the relevant valid registrations certificates for claiming exemption of EMD along with Techno Commercial bid.

9.5 Condition for availing benefit under purchase preference to local SSIs (MSEs) clause no.1.9(e) of tender notice & payment terms as per clause no. 4.0 above by local micro & small entrepreneurs (local SSIs): The local SSI unit shall submit notary attested copy of a valid SSI/MSE registration certificate/Entrepreneur memorandum acknowledgement part-II issued by any of the following for the items/ item category for which they are registered for availing the relevant benefits.

(a) District Industries Centre of Visakhapatnam.

(b) District Industries Centre of Srikakulam/Vizianagaram/East Godavari District i.e units located within 100 Km of road distance of Visakhapatnam Steel Plant and falling under the jurisdiction of respective District Industries Centres.

(c) NSIC registered units falling within the above jurisdictions i.e in (a) or (b) above.

9.6 The EMD / Bid money shall be forfeited:

a) if a Tenderer withdraws or modifies his Bid during the period of Bid validity specified by the Tenderer, or

b) in case of a successful Tenderer, if the Tenderer fails to furnish Performance Guarantee Bond in accordance with clause 9 of Annexure - II of the Tender documents.

10.0 **PERFORMANCE GUARANTEE BOND**:

10.1 The successful tenderer should submit Performance Guarantee so as to be received in the office of Asst. General Manager (MM-Purchase), RINL/VSP before the date of commencement of supplies or 30 (Thirty) days from the date of LOA / Acceptance to Tender, whichever is earlier. The Performance Guarantee Bond is to be furnished in the form of Bank Guarantee as per proforma at **Annexure – VIII** of the tender document, for an amount covering 5% (FIVE percent) of the value of the contract on total landed cost basis. No change in the prescribed proforma of the Bank Guarantee for Performance Guarantee bond is acceptable.

10.2 The Performance Guarantee Bond should be established in favour of RINL through any Nationalized Bank situated at Visakhapatnam or outstation **with a clause to enforce the same on their local branch at Visakhapatnam**. The bond should be issued by any scheduled bank (other than nationalized bank), branch located in Visakhapatnam only. Bonds from Co-operative banks are not accepted

10.3 The Performance Guarantee Bond shall be for the due and faithful performance of the contract and shall remain binding, notwithstanding such variations, alterations or extensions of time as may be made, given, conceded or agreed to between the successful tenderer and the Purchaser under the terms & conditions of Acceptance to Tender.

10.4 The successful tenderer is entirely responsible for the due performance of the Contract in all respects according to the spirit, intent and meaning of the terms & conditions and specifications and all other documents referred to in the Acceptance to Tender.

10.5 The Performance Guarantee Bond shall be kept valid and in full force and effect during the period of the contract and shall continue to be enforceable for a period of

120 (One hundred and twenty) days from the date of delivery of the last consignment of the respective A/T.

10.6 The Performance Guarantee Bond shall be released after 90 days from the date of receipt of last consignment, subject to clearance from user department, under the Acceptance of Tender.

11.0 **STATEMENT OF DEVIATIONS**:

11.1 If any tenderer is unable to accept any particular term(s) as incorporated in the Tender document, or proposes any deviation therefrom, the Tenderer shall enclose along with his offer, a statement of deviations clearly spelling out the deletions / deviations proposed, which may, however, have an im` on the evaluation of his offer or rejection by RINL. **Each tenderer shall give an undertaking along with his offer confirming his acceptance to all the terms and conditions of the Tender document / GCC, except for the deletions / deviations specifically proposed by them in their offer. (Refer Annexure-VII for General Conditions of Acceptance to Tender).**

11.2 Offers with any deviations to the following terms and conditions contained in the tender document are not acceptable to VSP and such offers are liable for rejection:

a) Specification, b) Price firmness, c) Submission of Bid Money, d)Liquidated damage e) Risk Purchase f) Acceptance to signing of Integrity pact

12.0 **OTHER GENERAL POINTS RELATING TO THE PREPARATION / SUBMISSION / DESPATCH OF THE OFFER:**

12.1 The detailed offer together with its enclosures should be submitted as Part-A - Techno-Commercial Bid in a sealed envelope. Part-A should contain all details on technical specifications, other information/ data/ documents/ confirmations/ deviations, if any. Confirmation with regard to information/ data/ documents to be furnished by tenderers as per Para 1.0 and 2.0 above are also to be enclosed in Part-A.The techno Commercial offer will be applicable for entire one year Quantity. This should be sealed in a cover and super scribed as "part A Techno Commercial offer for empanelment for supply of Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply

Part-B: It will consist of price and quantity for procurement .It will consist of sealed covers which should consist of quantity offered against our requirement submitted separately in the prescribed proforma at **Annexure-III** to the Tender Documents and the cover should be superscribed as Price Bid.

12.2 Each page of the offer should be numbered consecutively, referring to the total number of pages comprising the entire offer, at the top right-hand corner of each page.

12.3 Each page of the offer should be signed by the authorised officer(s) of the Tenderer.

12.4 The Part-A & Part-B of the offer together with its enclosures in separate sealed envelopes, should be placed in an envelope which should bear, in Block capital letters, superscription **"Tender for Tender No.Pur.3.21.0057/0483 Dt 03.02.2014** Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply and should also bear superscription:

Part-A: Techno Commercial offer for Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply

Part-B: The price and quantity for Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply The two envelopes should then be sealed separately. The name and address of the tenderer should be mentioned on this envelope.

12.5 The envelopes referred to in para 124 above should be placed in another envelope which should be addressed to the ED(MM)**, Administration Building, Block-A, Purchase Dept, Visakhapatnam Steel Plant, Visakhapatnam 530 031, Andhra Pradesh, India** and should bear in Block Capital Letters the superscription **"OFFER IN RESPONSE TO TENDER NO. PUR.3.21.0057/0483; 03.02.2014** This envelope should also be sealed. The name and address of the Tenderer should be mentioned on this envelope as well.

12.6 **Evaluation and rejection of offers**

12.6.1 RINL evaluates technical and commercial acceptable offers on Landed net of cenvat price (LNCP/VAT) basis.

12.6.2 After the reverse e-auction is conducted, the sealed price bids of all TA& CA tenderers irrespective of whether they have participated in the reverse e-auction or not, shall be opened within 2 days. Based on the prices so received through reverse e-auction and the sealed price bids received along with the Techno Commercial offers, a composite comparative statement shall be made considering the lower of the prices (i.e Sealed prices and reverse e-auction prices) of all the tenderers. Placement of order shall be considered on the L-1 price (LNCP) so arrived. Refer our ***"detailed terms and conditions of invitation to supply***" in the web site www.vizagsteel.com for details.

12.6.3 Offers which deviates from the vital conditions (as illustrated below) of the tender shall be rejected.

a. Variable price being quoted against requirement of Firm prices.
b. Non submission of complete offers, appending signature on the offer and the prescribed formats.
c. Receipt of Offers after due date & time and or by e-mail/ fax
d. Receipt of offers in open condition
e. Non-submission of EMD/Bid Bond amount.

12.7 In case any tenderer is silent on any clauses mentioned in this tender document, VSP shall construe that the tenderer had accepted the clauses as per this Invitation to Tender.

12.8 The price quotations should be given in only in the price format and not in any other accompanying documents or statement. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.

13.0 **COMPLETENESS OF THE TENDER**:

13.1 Each Tenderer should ensure that the aforesaid conditions for submission of offers are duly complied with. Failure to furnish correct and detailed information as called for, will render the concerned tender liable to rejection.

14.0 **PUNITIVE ACTIONS TO BE TAKEN AGAINST AGENCIES WHO SUBMIT FALSE/FORGED DOCUMENTS TO VSP.**

14.1 If it comes to the notice of VSP at any stage after request for enlistment/ tender document that any of the certificates / documents submitted by applicants for enlistment or by bidders are found to be false/ fake/ doctored, the party will be debarred from participation in all VSP tenders for a period of 5 years including termination of contract, if awarded. EMD/ Security Deposit etc. if any, will be forfeited. The contracting Agency in such cases shall make good to VSP any loss or damage resulting from such termination. Contracts in operation anywhere in VSP will also be terminated with attendant fall outs like forfeiture of EMD/ Security Deposit, if any, and recovery of risk and cost charges etc. Decision of VSP Management will be final and binding.

14.2 In case commercially and technically acceptable lowest price offered tenderers backs out after tender is opened in single bid tender and in two bid tender after commercial bid/price bid is opened or after finalisation of contract punitive action shall be taken as per prevailing guidelines.

15.0 **Right to reject tenders**

15.1 RINL/VSP does not pledge itself to accept the lowest or any other tender and reserves to itself the right of accepting the whole or any part of the tender or portion of the quantity tendered and tenderes shall supply the same at the rate quoted.

16.0 **Authorisation**

16.1 Representative of the tenderers are required to produce letter of authorization, if they are to be permitted to attend tender/price bid opening.

17.0 Application Job:

a) Supplier may carry out the application job through their sub-agency by sub-letting the work. The supplier shall be responsible for fulfillment of all the statutory rules and regulations laid down by Contract Labour Cell and Safety Engg. Dept. of VSP which are subject to changes from time to time.

b) In case of sub- letting the supplier is responsible for fulfillment of statutory requirements of CLC & SED of VSP as mentioned above, fulfillment of performance guarantee, ensuring supervision during relining and while in circulation, payment of wages to workers in case of failure to do so by the sub-agency etc.

(c) The party shall note that all the labour employed for the job shall be paid minimum wages as prescribed by the central government and also party shall note that they shall revise the minimum wages as and when Government revises. Party shall note that it is a statutory requirement which cannot be violated.

PROFORMA FOR PRICE BID

ANNEXURE-III

(TENDER NO.PUR.3.21.0057/0483 Dt. 03/02/2014)

1.0 D G set as per Annexure-1		
Catalogue No.	16/01889000007	
Quantity Accounting Units	(Nos./Set/MT/Pairs, etc.)	
PRICE DETAILS		
Basic Price / Unit (in figures)	(Rs.)	
Basic Price / Unit (in words)	(Rs.)	

2.0 Tools & tackles as per Annexure-B.2		
Catalogue No.		
Basic Price / Unit (in figures)	(Rs.)	
Basic Price / Unit (in words)	(Rs.)	

Packing & Forwarding Charges, if quoted extra	
Excise Duty incl. Edn. Cess & Hedn.Cess / CVD & Addl. Duty as applicable	
Sales Tax (AGAINST FORM "C") /VAT	
Freight Charges, if quoted extra Insurance:	
Minimum Excise Assessable Value for each of the item offered at 1.0,2.0 & 3.0 should be furnished separately.	

Application / Supervision of Erection & Commissioning / Installation Charges (if any, in the scope of the Tender) :Service Tax incl. Cess (%) : Extra / Included

Note: Except the above details, any other condition / information if any, given in the format shall not be considered for evaluation

Specify APVAT and TIN No. if supplies are from Andhra Pradesh

:

SIGNATURE OF THE TENDERER / THEIR AUTHORISED REPRESENTATIVE WITH SEAL

FORMAT FOR ITEMISED PRICE LIST FOR TWO (2) YEARS SPARES

Price (Ex-works)

Sl.No	Spare Parts	Qty	Unit(Rs.)	Total(Rs.)

ANNEXURE-IV

(TENDER NO PUR.3.21.0057/0483 Dt.03.02.2014)
SEE PARA 2.3 OF INSTRUCTIONS TO TENDERERS
CHECK LIST TO BE FILLED UP AND SENT ALONG WITH TECHNO -COMMERCIAL BID – PART-A OF YOUR OFFER

SL. NO.	TENDER TERMS	AS REQUIRED BY VSP	TO BE CONFIRMED BY PARTY ACCEPTED / NOT ACCEPTED	DEVIATIONS IF ANY
1	Name and address of the Tenderer			
2	Quantity offered	To be confirmed as per Para 1.2 of ITT		
3	Technical specification	To be confirmed as per Annx-I of tender document		
4	Delivery schedule	To be confirmed as per Para 1.3 & 1.3.1 of ITT		
5	Payment terms	To be confirmed as per Cl.4 of Annx-II of ITT		
6	Bid Bond / Bid Money	To be confirmed as per Cl.8 of Annx-II of ITT		
7	Submission of Quality Assurance plan	To be confirmed		
8	Price Basis	To be confirmed as per Cl.3 of Annx-II of ITT		
9	Price firmness	To be confirmed as per Cl.2 of Annx-VII of ITT		
10	Insurance	To party's a/c (for indigenous supply)		
11	Packing	To be confirmed		
12	Validity of offer	To be confirmed as per Cl.7 of Annx-II of ITT		
13	Inspection	To be confirmed as per Cl.1 of Annx-VII of ITT		
14	Test cum Guarantee certificate	To be confirmed		
15	Liquidated damages	To be confirmed as per Cl.4 of Annx-VII of ITT		
16	Default	To be confirmed as per Cl.5 of Annx-VII of ITT		
17	Risk Purchase	To be confirmed as per Cl.5.2 of Annx-VII of ITT		
18	Arbitration & Jurisdiction	To be confirmed as per Cl.12 of Annx-VII of ITT		
19	Force Majeure	To be confirmed as per Cl.11 of Annx-VII of ITT		
20	Performance Guarantee Bond	To be confirmed as per Cl.9 of Annx-II of ITT		
21	Commencement of supplies	To be confirmed as per Cl.1.3.1 of ITT		
22	Evaluation of offers	To be confirmed as per Cl.11.6.2 of Annx-II of ITT		
23	Other terms and condition of ITT / GCC	To confirm acceptance.		
24	Submission of Integrity Pact	To be submitted along with the offer as per format at VSP website		
25	Acceptance of Assessable Value clause	To confirm acceptance as per Cl. No.4.2.1 of Annx.-II of ITT		

……..
Signature and Name of the Tenderer

ANNEXURE-V

TENDER NO PUR.3.21.0057/0483 Dt.03.02.2014
PROFORMA OF BANK GUARANTEE FOR BID BOND

(To be typed on Non-judicial stamp paper of the value of Indian Rupees of One Hundred)

TO BE ESTABLISHED THROUGH ANY OF THE NATIONALISED BANKS (WHETHER SITUATED AT VISAKHAPATNAM OR OUTSATTION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT VISAKHAPATNAM OR ANY SCHEDULED BANK (OTHER THAN NATIONALISED BANK) SITUATED AT VISAKHAPATNAM. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.

To

Rashtriya Ispat Nigam Limited
Visakhapatnam Steel Plant,
Admn. Building,
Visakhapatnam-530 031.
INDIA.

Bank Guarantee No. **Dt.**

LETTER OF GUARANTEE

WHEREAS Rashtriya Ispat Nigam Ltd., Visakhapatnam Steel Plant (hereinafter referred to as RINL) have invited Tenders vide Tender No. **Pur.3.21.0057/0483; Dt.03/02/2014** (hereinafter referred to as the said Invitation to Tender) for Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply AND WHEREAS the said Invitation to Tender requires that any eligible Tenderer wishing to make an offer in response thereto shall establish an irrevocable Bid Bond in favour of RINL in the form of Bank Guarantee for (**) Rs. ……. and valid upto ……. as guarantee that the tenderer:

a) shall keep his offer firm and valid for acceptance by RINL till _____.

b) shall, in the event of the offer being accepted by RINL, establish a Performance Guarantee (PG) Bond in favour of RINL, in the form of Bank Guarantee covering 5% (Five percent) of the value of Acceptance to Tender / LOA or before commencement of supplies, whichever is earlier.

AND WHEREAS M/s.....(hereinafter referred to as the said Tenderer) wish to make an offer in response to the said Invitation to Tender for the Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply on the basis of (**)FOR VSP Stores NOW THIS BANK HEREBY GUARANTEES that in the event of the said Tenderer failing to abide by any of the conditions referred to in any of the preceding paragraphs, this Bank shall pay to Rashtriya

Ispat Nigam Ltd., Visakhapatnam Steel Plant, Visakhapatnam, INDIA on demand and without protest or demur (**) Rs…… (Rupees……...).

This Bank further agrees that the decision of RINL as to whether the said Tenderer has committed a breach of any of the conditions referred to in the preceding paragraphs, shall be final and binding.

We, ..…… (name of bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the Tenderer and/ or RINL.

This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our Branch office at Visakhapatnam situated at …….. (Address of local branch at Visakhapatnam).

THIS BANK FURTHER undertakes that this Guarantee shall remain irrevocably valid and in force upto _____ and bank also agrees to extend the bank guarantee till _____.

For and on behalf of _____
(Name of the Bank)

Signature
Name ( )
Duly constituted attorney and
authorised signatory
Designation :Name and Address :
of the Bank

** - To be modified based on the source of supply i.e., Indigenous or Import.

ANNEXURE-VI

(TENDER NO PUR.3.21.0057/0483 Dt 03/02/2014)
LETTER OF AUTHORITY FROM ESTABLISHED MANUFACTURER
See 2.1.2 of Annexure -II of the Tender Documents)

To

THE ED(MM),
BLOCK 'A' PURCHASE DEPARTMENT,
ADMINISTRATIVE BUILDING,
RASHTRIYA ISPAT NIGAM LTD.,
VISAKHAPATNAM STEEL PLANT,
VISAKHAPATNAM 530 031 (A.P).

Dear Sir,

Sub:Your Tender Notice No.PUR.**3.21.0057/0483; Dt.03/02/2014**.

We, ... a principal of Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA of (place).....do hereby authorise M/s.....(Name and address of Seller) to make an offer in response to this invitation to tender.

We, ... a principal Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply do hereby convey our consent FOR Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply to the tendered specification through M/s.....(Name and address of Supplier) as per the terms and conditions of the tender.

No Company/Firm or individual other than M/s.....is authorised to represent us in regard to this business against this specific tender. In the event, the offer made by M/s.....being considered by RINL for acceptance both M/s .....and ourselves shall be jointly and severally responsible for the due and timely performance of the Acceptance to Tender. We hereby extend our full guarantee and warranty for the goods offered for supply against this Invitation to Tender by the above firm.

Yours faithfully
(NAME)

for & on behalf of M/s.....
(Signature and Name of Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply

Note: This letter of authority should be on the Letter-Head of the Manufacturer and should be signed by a person competent and having the power of attorney to bind the Manufacturer. **This letter of authority should be submitted in original along with Part- A: Techno-commercial bid.**

ANNEXURE-VII

(TENDER NO.PUR.3.21.0057/0483 Dt.03.02.2014

GENERAL CONDITIONS OF ACCEPTANCE TO TENDER

1.0 **INSPECTION**: Inspection shall be done at VSP site at Madharam.

2.0 **PRICE VARIATION**: The price shall remain firm till completion of supplies(ref cl8.1 of Annexure-II)

3.0 **TERMS OF PAYMENT**:

3.1 Payment terms as per clause 5.0 of Annexure-II.

3.2 The Seller shall despatch materials on door delivery basis ensuring that the ED Gate Pass 'duplicate copy' for the transporter (for availing CENVAT) and "Tax Invoice" (for availing VAT) is handed over by the transporter to VSP. In case of non-submission of this document, the amount equivalent to the loss of CENVAT / VAT shall be recovered from the amount due.

4.0 LIQUIDATED DAMAGES

4.1 Delivery is the essence of the Contract and hence should any consignment be delayed, liquidated damages @ 0.5% of the price of the delayed consignment, for each week or part thereof shall be levied and recovered subject to a maximum of 10% of the total order value. However, this is subject to the condition that delayed quantity. The liquidated damages for delayed supplies (if any) as mentioned above shall be calculated once in every three months and recovered from the bills of the Seller.

5.0 **DEFAULT**:

5.1 Should the SELLER fail to provide the MATERIAL for delivery by the time or times agreed upon or should the SELLER in any manner or otherwise fail to perform the Acceptance to Tender or should a receiver be appointed on its assets or make or enter into any arrangements or composition with Creditors or suspend payments (or being a company should enter into liquidation either compulsory or voluntary), the PURCHASER shall have power to declare the Acceptance to Tender as at an end at the risk and cost of the SELLER in every way. In such a case, the SELLER shall be liable for any expenses, damages or losses which the PURCHASER may incur, sustain or be put to by reason of or in connection with SELLER's default. This Clause is however subject to Force Majeure vide 11.0 herein below.

5.2 **RISK PURCHASE**

The PURCHASER reserves the right to take Risk Purchase action at the cost and risk of the SELLER, in case he fails to deliver the materials in the specified schedule and the differential cost shall be recovered. The cancellation of the Acceptance to Tender as stated in para 10 herein above may be either for whole or part of the Acceptance to Tender at PURCHASER's option. In the event of the PURCHASER terminating the Acceptance to Tender in whole or in part, he may procure, on such terms and in such manner as he deems appropriate, supplies similar to those so terminated and the SELLER shall be liable to the PURCHASER for any excess costs for such similar supplies. However, in case of part termination of Acceptance to Tender by the PURCHASER, the SELLER shall continue the performance of the Acceptance to Tender to the extent it is not terminated under the provisions of this Clause.

6.0 **RECOVERY OF SUMS DUE:**

6.1 Whenever under this Acceptance to Tender any sum of money is recoverable from and payable by the SELLER, the PURCHASER shall be entitled to deduct such sum from any amount then found payable to the SELLER by the PURCHASER or which at any time thereafter may be found to be payable to the SELLER by the PURCHASER under this or any other Acceptance to Tender with the PURCHASER. Should this sum be not sufficient to cover the full amount recoverable, the SELLER shall pay to the PURCHASER on demand the remaining balance amount. This action shall be without prejudice to the right of the PURCHASER to take legal action against the SELLER for the breach of the Acceptance to Tender.

7.0 **RESPONSIBILITY:**

7.1 The PURCHASER on the one hand and the SELLER on the other hand shall be responsible for the performance of all their respective obligations under this Acceptance to Tender.

8.0 **TRANSFER AND SUB-LETTING:**

8.1 The SELLER shall not sublet, transfer, assign or otherwise part with the Acceptance to Tender or any part thereof, either directly or indirectly, without the prior written permission of the PURCHASER.

9.0 **COMPLETENESS OF THE AGREEMENT AND MODIFICATION**:

9.1 This Acceptance to Tender cancels all previous negotiations between the parties hereto. There are no understandings or agreement between the PURCHASER and the SELLER which are not fully expressed herein and no statement or agreement, oral or written, made prior to or at the signing hereof shall affect or modify the terms hereof or otherwise be binding on the parties hereto. No change in respect of the terms covered by this Acceptance to Tender shall be valid unless the same is agreed to in writing by the parties hereto specifically stating the same as an amendment to this Acceptance to Tender.

10.0 **WAIVER**:

10.1 Failure to enforce any condition herein contained shall not operate as a waiver of the condition itself or any subsequent breach thereof.

11.0 **FORCE MAJEURE**:

11.1 If either the SELLER or the PURCHASER be prevented from discharging his or their obligation under this Acceptance to Tender by reason of arrests or restraints by Government of people, war blockade, revolution, insurrection, mobilization, strikes, civil commotion, Acts of God, Plague or other epidemics, destruction of the MATERIAL by fire or flood or other natural calamity interfering with the production, loading or discharge, the time for delivery shall be extended by the time or times not exceeding one year, during which production, loading or discharge is prevented by any such causes as herein above mentioned. The party invoking protection under this clause shall within 15(fifteen) days of the occurrence of Force Majeure causes put the other party on notice supported by Certificate from the Chamber of Commerce or concerned Governmental authority and shall likewise intimate the cessation of such causes. The delivery shall be resumed by the Party/Parties within 15 (fifteen) days from the cessation of the Force Majeure causes.

11.2 Should there be any interruption in the carrying out the contract due to Force Majeure circumstances detailed in para 11.1 herein above, it is hereby mutually agreed

between the PURCHASER and the SELLER that the period of offtake of the contract by the PURCHASER/period of delivery of the MATERIAL by the SELLER shall automatically stand extended by a period not exceeding one year, equal to the actual duration of the causes interrupting the offtake by the PURCHASER and/or carrying out the contract by the SELLER plus a period of six weeks to enable the affected party to make suitable arrangements for normalization of shipments.

12.0 **ARBITRATION AND JURISDICTION:**

12.1 All disputes arising out of or in connection with the Acceptance to Tender shall be finally settled by Arbitration in accordance with the rules of Arbitration of the Indian Council of Arbitration and the Award made in pursuance thereof shall be binding on the parties. The Arbitration bench shall give a reasoned award. Cost of arbitration to be borne by the losing party. The venue of arbitration shall be Visakhapatnam, India and language of arbitration shall be in English.

12.2 In case of any legal proceedings are instituted against Rashtriya Ispat Nigam Limited, Visakhapatnam Steel Plant, they shall be instituted in the appropriate Civil courts of Visakhapatnam and the Courts at Visakhapatnam only shall have Jurisdiction.

13.0 **LEGAL INTERPRETATIONS**:

13.1 The Acceptance to Tender and the arbitration shall be governed by and construed according to the laws of India for the time being in force.

14.0 **LIABILITY OF GOVT. OF INDIA:**

14.1 It is expressly understood and agreed by and between the SELLER and the PURCHASER that the PURCHASER is entering into this Acceptance to Tender solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood and agreed that the Govt. of India is not a party to this Acceptance to Tender and has no liabilities, obligations or rights hereunder. It is expressly understood and agreed that the PURCHASER is an independent legal entity with power and authority to enter into contracts solely in its own behalf under the applicable laws of India and general principles of Contract Law. The SELLER expressly agrees, acknowledges and understands that the PURCHASER is not an agent, representative or delegate of the Govt. of India. It is further understood and agreed that the Govt. of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of this Acceptance to Tender. Accordingly, the SELLER hereby, expressly waives, releases and foregoes any and all actions or claims, including cross claims, impleader claims or counter claims against the Govt. of India arising out of this Acceptance to Tender and covenants not to sue the Govt. of India as to any manner, claim, cause of action or thing whatsoever arising of or under this Acceptance to Tender.

15.0 All other terms and conditions shall be as per VSP's G.C.C for supply of Material.

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ANNEXURE-VIII

(TENDER NO.PUR.3.21.0057/0483 Dt.03.02.2014)

PROFORMA OF BANK GUARANTEE FOR PERFORMANCE GUARANTEE BOND

(To be submitted on Non-judicial stamp paper of value of Indian Rupees one Hundred drawn on the name of the issuing Bank)

TO BE ESTABLISHED THROUGH ANY OF THE NATIONALISED BANKS (WHETHER SITUATED AT VISAKHAPATNAM OR OUTSATTION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT VISAKHAPATNAM OR ANY SCHEDULED BANK (OTHER THAN NATIONALISED BANK) SITUATED AT VISAKHAPATNAM. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.

To
Rashtriya Ispat Nigam Limited,
Visakhapatnam Steel Plant,
Administrative Building,
Visakhapatnam-530031

Bank Guarantee No Dt

LETTER OF GUARANTEE

WHEREAS M/s_____hereinafter referred to as the SELLER) and M/s RASHTRIYA ISPAT NIGAM LIMITED (hereinafter referred to as the PURCHASER) have entered into an AGREEMENT vide ACCEPTANCE TO TENDER No._____ Dated_____(hereinafter called the said A/T) for the supply of_____(_____) Design, supply, installation and commissioning of Diesel Generator of 11 KV and 1500 KVA as per enclosed specification & scope of supply (hereinafter referred to as the MATERIALS) on the terms and conditions mentioned therein.

2. We, …….... (name of bank & branch) at the request of the SELLER, do hereby undertake and indemnify and keep indemnified the PURCHASER to the extent of Rs. _____(Rupees_____) against any loss or damage that may be caused to or suffered by the PURCHASER, by reason of any breach by the SELLER of any of the terms and conditions of the said A/T and/or in the performance of the said A/T by the SELLER. We agree that the decision of the PURCHASER as to whether any breach of any of the terms and conditions of the said A/T or in the performance thereof has been committed by the SELLER and the amount of loss or damage that has been caused to or suffered by the PURCHASER shall be final and binding on us and the amount of the said loss or damage shall be paid by us forthwith to the PURCHASER on demand and without protest or demur.

3. We, ……. (name of bank & branch) hereby further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for satisfactory performance and fulfillment in all respects of the said AGREEMENT and that it shall continue to be enforceable for (a) 120 days after the date of L/R of the last consignment of the MATERIALS under the said AGREEMENT or (b) in the event of any dispute(s) between the PURCHASER and the SELLER, until such period(s) the dispute is settled fully, whichever date is the latest and that if any claim accrues or arises against us, ……(name of bank & branch) by virtue of this guarantee before the dates referred to at (a) and (b) herein above, the same shall be enforceable against us,

…….. (name of bank & branch), notwithstanding the fact that the same is enforced after the dates referred to at (a) or (b) herein above, whichever date is the latest, provided that notice of any such claim has been given by the PURCHASER before the dates referred to at (a) or (b) herein above, as the case may be. Payments under this LETTER OF GUARANTEE shall

be made promptly upon our receiving the notice to that effect from the PURCHASER on demand and without protest or demur.

4. We, …… (name of bank & branch) undertake not to revoke this Guarantee during its currency without the prior written consent of the PURCHASER.

5. We, …….. (name of bank & branch) hereby further agree that the PURCHASER shall have the fullest liberty, without affecting in any manner our obligations here under, to vary any of the terms and conditions of the said A/T or to extend the time of performance of the said A/T by the SELLER from time to time or to postpone for any time or from time to time any of the powers exercisable by the PURCHASER against the SELLER and to forbear or to enforce any of the terms and conditions relating to the said A/T and We, ... (name of bank & branch) shall not be released from our liability under this Guarantee by reason of any such variation or extension being granted to the SELLER or any forbearance and/ or omission on the part of the PURCHASER or any indulgence by the PURCHASER or by any other matter or thing whatsoever which under the law relating to sureties would, but for this provision, have the effect of so releasing us from our liability under this Guarantee.

6. We, …….. (name of bank & branch) hereby further agree that the Guarantee herein contained is initially valid upto _____and that the same shall be extended further according to the provisions contained herein above.

7. We, ... (name of bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the SELLER and/ or the PURCHASER.

8. We, ……(name of bank & branch) hereby further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our Branch office at Visakhapatnam situated at …….. (Address of local branch at Visakhapatnam).

Note: The expression "SELLER" wherever appearing in this Performance Guarantee Bond shall also include the "PRODUCER".

FOR AND ON BEHALF OF
(name of bank & branch)

Signature:
Name:

DULY CONSTITUTED ATTORNEY &
AUTHORISED SIGNATORY

Designation
(name of bank & branch)

Pur.3.21.0057
Dt.04/02/2014

Sub: **PROPOSAL FOR ISSUE OF OPEN TENDER FOR PROCUREMENT OF DESIGN,SUPPLY, INSTALLATION AND COMMISSIONING OF 11 KVA AND 1500 KVA DIESEL GENERATOR SET**

Ref: Indent No.9121430021, dt,24/05/2013
Estimated Value :Rs.1,78,00,000

With reference to the above, Indent is received for the DESIGN,SUPPLY, INSTALLATION AND COMMISSIONING OF 11 KVA AND 1500 KVA DIESEL GENERATOR SET for Madharam Mines. The tender documents to float the open tender are prepared and the same is enclosed herewith. Hence it is proposed to issue Open Tender as per the detailed terms & Conditions for the Open Tender is placed at Page No. C-41 to C- 68.

The evaluation of the offer is based on the price quoted for the DG set & Tools & tackles. Prices of Two years spares is not considered for evaluation. Also,since the indent envisages Design, supply, Installation and commissioning of the DG Set, the payment shall be 80% against GARN with 60 days credit & balance 20% against Satisfactory performance (on successful completion of work & performance,as per the scope of work) certified by DGM(Mines)-I/c.

The following are proposed for the issue of this Open Tender:

a) To publish the tender notice in leading Indian news papers Zonal-wise.
b) To upload proposed tender document & tender notice in RINL Website.
c) To send copy of the Tender notice to VSP's liaison offices for wide Publicity.
d) To send intimation & copy of the Tender notice to the 4 parties recommended.
e) EMD of Rs.1,75,000/- is specified

In view of the above.

1) GM (MM) may kindly approve for issue of Open Tender
2) ED(MM) may kindly approve for Publications of Tender notice in leading Newspapers, zone wise & Uploading on VSP website.

Submitted Please.

(T.TIRUPATI RAO)
Dy.Manager(S)

AGM(MM)

DGM(MM)

GM(MM)

ED(MM)